

# EPILEPSY

## Centers of Excellence

FY18

Improving the health and well being of  
Veteran patients with epilepsy and other  
seizure disorders through the integration  
of clinical care, research and education.

**VA**



U.S. Department  
of Veterans Affairs

Epilepsy Centers  
of Excellence



# Epilepsy Centers of Excellence ANNUAL REPORT FISCAL YEAR 2018

October 1, 2017 – September 30, 2018

**VA**



**U.S. Department  
of Veterans Affairs**

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Epilepsy Centers  
of Excellence



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*2018 Annual Report Project Manager:*  
Pamela Kelly, DHA, MBA/HCM

*In addition to the ECoE Directors and staff, special thanks to those who went above and beyond to assist in bringing this annual project to fruition: Linda Benson, MPH; Winona Finley, Rizwana Rehman, PhD, and Ronda Tschumper, R. EEG/EP T, CLTM.*

# Mission

*Improve the health and well-being of Veteran patients with epilepsy and other seizure disorders through integration of clinical care, outreach, research, and education.*

## Message from the VA National Program Director, Neurology



Looking back on the past year, everyone should feel a sense of pride knowing that Veterans have continued to have access to high-quality and timely specialist neurology care. This is quite an accomplishment with the fiscal and administrative challenges that have plagued the Epilepsy Centers of Excellence (ECoE) and other programs in Neurology. The proposal to remove specific purpose funding from the ECoEs placed in jeopardy this vital program. Earlier experience with the loss of specialized funding prompted a rapid, coordinated and thoughtful response from ECoE leadership. Thankfully, funding for the ECoE will remain specific purpose! But, while we have been provided a reprieve, continued reflection on our programs is critical to ensure that limited resources are utilized in the most effective manner possible. We must redouble our efforts to identify alternative

sources of funding for these programs, be that through securing an increase in the annual appropriation or by identifying new avenues of support.

The past year has also witnessed some notable personnel changes, or plans for change, among leadership in the ECoE. Direction of the Southwest Region has transitioned to the capable hands of Nina Garga at the San Francisco VAMC. Thanks to James Chen for his considered leadership these past few years! We have learned that Paul Rutecki will be leaving the VA, as will Allan Krumholz, in the coming months. Theirs have been voices of reason and sage advice for many years and will prove challenging to replace. It is my sincere hope that they will welcome occasional contact so we can continue to benefit for their valued perspective. Assuming the National Director position in January will be Aatif Husain, who has extensive leadership experience, having established and provided sound direction to the Southeast Region ECoE. The Southeast Region will be well-served by the guidance of Raquel Lopez.

These transitions will be difficult but the foundation of the ECoE program remains strong and the energy and dedication of our senior and junior colleagues instills confidence that the future will be bright. While there is uncertainty within VA, together we can continue the important work of ensuring that Veterans everywhere are able to receive expert treatment for epilepsy and epileptiform disorders. Furthermore, we will champion efforts to extend knowledge regarding the pathogenesis, epidemiology and management of epilepsy. Finally, we must ensure that this information is conveyed to Veterans, their families and caregivers and medical professionals.

Many thanks for all that you have accomplished and appreciation for your continued efforts in the months and years to come.

A handwritten signature in black ink that reads "Donald S. Higgins, Jr." The signature is written in a cursive, flowing style.

**Donald S. Higgins, Jr., M.D.**  
National Director for Neurology  
Veterans Health Administration

## Message from the Acting National ECoE Director



It is with bittersweet feelings that I write my last national director's annual letter. The sweetness is that I will fade off into retirement where I will be free of bureaucratic hassles and have the freedom to do what I want within limits. The bitterness is to not have the opportunity to work with a great group of people dedicated to the care of Veterans with seizures. I also am happy that I am leaving the position to a most able successor, Dr. Aatif Husain.

The year has seen many achievements in our core missions of clinical care, research, and education. We continue to operate and provide excellence in epilepsy care. We welcome the Boston VA healthcare network into our centers of excellence this year. Our clinical services continue to grow in numbers, including home telehealth care. The telemental health and local site cognitive behavioral therapy for epilepsy and psychogenic non-epileptic seizures (PNES) is unique and not replicated in the private sector. Increasing number of Veterans are now having their responsive neurostimulation managed through our centers and the West LA VA is providing on-site implantation. We continue to promote self-management in epilepsy care. The epilepsy care for Veterans is on par or better than received in the private sector.

Concerning research, we have continued to have a robust number of individual grants awarded to our researchers. This includes several Department of Defense-funded projects regarding the epidemiology of epilepsy, neuroimaging of epilepsy and PNES, and system level analysis of PNES patient care. With the help of UCB and John Hixson in San Francisco, a multi-site project to evaluate peer support for Veterans with epilepsy is about to begin. In addition, projects at several sites are evaluating the Brain Sentinel device in detecting seizures. The cooperative study proposed by Drs. Salinsky and LaFrance for the treatment of PNES is continuing to be developed. Lastly, a roadmap for basic research in epilepsy was created during a meeting funded by central office research and development for biomedical and laboratory research.

Our educational webinars for patients and caregivers as well as a separate series for providers was re-introduced this year. A YouTube video highlighting issues for women with epilepsy is in its last stages of production and soon to be released. Two TMS productions that provide CME credit were created through the auspices of the VA Employee Education System. A second edition of the Epilepsy Manual was published and is available through our web page as are our other educational materials. We have continued to share our educational resources through the National Epilepsy Education and Awareness Collaborative (NEEAC) Community of Practice.

I want to thank Pamela Kelly and Andrew David for their great administrative help over the past year. They are responsible for the many successes we have had. I am proud of the accomplishments that the epilepsy centers of excellence and consortium members have had, and will miss sharing in their future successes. I am confident that the group will continue to meet the mission of the centers: improving the health and well-being of Veteran patients with epilepsy and other seizure disorders through the integration of clinical care, research and education.

A handwritten signature in black ink that reads "Paul Rutecki". The signature is written in a cursive style and is positioned to the left of a vertical line.

**Paul Rutecki, MD**  
Acting National Director  
Epilepsy Centers of Excellence

## Message from the Acting National ECoE Director-elect



It is an honor for me to write as the Acting National Director-elect. I am very grateful for the confidence that the ECoE directors have shown in me to elect me to this very important position. Certainly Dr. Paul Rutecki's shoes are hard to fill, but I will try my best to continue the excellent work that he started and build on those foundations. I am also very appreciative of Dr. Don Higgins' support for the ECoE and for me personally.

The ECoE Directors meeting was recently held in Baltimore. At that meeting we decided on an ambitious series of goals that we want to accomplish in FY 2019. While many strides have been made in optimizing the care of veterans with seizures and epilepsy, we recognize that more must be done.

State-of-the-art clinical care is at the heart of the ECoE mission. The VA is leading in the innovative ways in which health care is delivered. These innovations include the use of telemedicine to evaluate patients in their homes, and to allow experts in ECoE to read EEGs done in facilities closer to Veterans. We will continue to enhance these and other programs to provide easier access to epilepsy care.

Research has been a core mission of the VA epilepsy services since the 1970s. It is no different for the ECoE. Next year's goals include enhanced basic science and clinical research. In addition to finding mechanisms of epileptogenesis, ECoE researchers are also addressing day-to-day management issues of Veterans with epilepsy, including the use of social media in clinical care. Additionally, large scale clinical trials designed to better understand psychogenic nonepileptic seizures are being planned. These seminal trials will influence care not only in the VA, but nationally and internationally.

Education of Veterans and providers is another very important mission and goal for the ECoE. A well-informed patient can demand optimal care; the ECoE strives to ensure that Veterans can understand their medical condition and seek the best care. Simultaneously, educating VA providers in the national standards for epilepsy care will further enhance care. One of the ECoE's goals this year will be to continue its educational seminars for patients and providers.

Building a coalition of physicians and hospitals that can provide superior epilepsy care has been important to the ECoE. The ECoE Consortium has been developed and includes epilepsy providers and other interested providers in non-ECoE sites. In the next year, we will continue to enhance this Consortium and build collaborative relationships.

The ECoE have embarked on an ambitious plan for the next fiscal year. These goals are achievable, and the dedicated and motivated directors of the ECoE are well positioned to realize them. They will, however, need support. While administrative support has been lacking in the recent past, this year an important goal will be to rectify that problem. We will try to fill the empty administrative positions so that the directors have partners helping them in their important tasks.

I am looking forward to an extremely productive year working with an excellent group of ECoE directors. I want to especially recognize Pamela Kelly, Administrative Director of the Southeast ECoE, for having stepped up to do a lot of national level work. Pamela and Andrew David, Administrative Director of the

Northeast ECoE, have managed to keep the ECoE functional despite the absence of a National Administrative Director. Additionally, Rizwana Rehman, Statistician of the SE ECoE, and Winona Finley, Administrative Assistant of the SE ECoE, have provided support to the entire ECoE. For their dedication and support, I am grateful.



**Aatif M. Husain, MD**  
Acting National Director-elect  
Epilepsy Centers of Excellence



# Introduction

In 2008 under Public Law S. 2162, the Department of Veterans Affairs (VA) set upon its mission to revolutionize services for the Veterans afflicted by epilepsy and other seizure disorders. The VA founded the Epilepsy Centers of Excellence (ECoE), establishing 17 sites that are linked to form four regional centers. The ECoE seek to provide the best possible epilepsy care to Veterans throughout the United States with state-of-the-art diagnostic and therapeutic services. Our goal is to deliver the highest quality of ongoing medical care to Veterans suffering from epilepsy. We also seek to promote outreach and educational efforts for both patients and their physicians in order to further the understanding of this chronic condition. The ECoE offers a range of services in both the outpatient and inpatient realms. The ECoE provides outpatient epilepsy clinics with a staff of neurology sub-specialists. From these clinics, patients can be directed to the most advanced testing methods for the evaluation of epilepsy, including magnetic resonance imaging (MRI), electroencephalography (EEG), and video monitoring. For those patients that require more intensive testing or attention, the ECoE also provide inpatient units for examining certain seizure types more closely, changing medications in a monitored setting, and presurgical evaluation. The epilepsy centers are also linked with the Polytrauma Centers to increase ability to mutually follow Veterans with moderate and severe traumatic brain injury that are at the greatest risk for post-traumatic epilepsy. The sites are developing protocols to identify Veterans with epilepsy and to develop referral networks to enable Veterans to obtain specialized treatment such as epilepsy surgery and advanced electro-diagnosis within the Veteran healthcare system

If you are a Veteran with seizures and are interested in seeking services at one of the Epilepsy Centers, please inquire with your local VA primary care physician. This doctor will be able to determine if you might benefit from the services provided by ECoE and assist you with scheduling an appointment. You can also contact your local ECoE site directly for assistance in connecting to services. For more information please visit our website at <http://www.epilepsy.va.gov>.

# National Program Goals

- ▶ Establishing a national system of care to all Veterans with epilepsy, to function as a center of excellence in research, education, and clinical care activities in the diagnosis and treatment of epilepsy.
- ▶ Collaboratively develop a national consortium of providers with interest in treating epilepsy at VA healthcare facilities lacking an epilepsy center of excellence in order to ensure better access to state-of-the-art diagnosis, research, clinical care, and education for traumatic brain injury and epilepsy throughout the VA healthcare system.
- ▶ To collaborate with VA Polytrauma/TBI System of Care that provide research, education, and clinical care to Veteran patients with complex multi-trauma associated with combat injuries.
- ▶ Utilizing national VA and other databases in order to inform providers and policy makers in VA Central Office about healthcare delivery and health policy decisions, conducting state-of-the-art research in epilepsy, and implementing an informatics backbone to meet the above objectives.
- ▶ To ensure an affiliation with accredited medical schools, providing education and training in neurology, and the diagnosis and treatment of epilepsy (including neurosurgery).
- ▶ Providing health professional education and training to nursing staff, medical students, house staff, fellows, and referring physicians, in order to deliver the highest quality of standard of care to Veterans with epilepsy.

## FY18 National ECoE Goals and Accomplishments

### Clinical

- ▶ QI/QA for women veterans with epilepsy
- ▶ Increase Store & Forward EEG services
- ▶ Increase home telehealth encounters
- ▶ Standard operating procedure for remote access to EEG
- ▶ Meet co-morbidity management needs
  - Bone health, general medical problems, mental health
- ▶ Guidelines for care coordination regarding EMU referrals

### Research/Surveillance

- ▶ New DoD grants regarding TBI, PNES, and epilepsy
- ▶ QA/QI on bone health
- ▶ UCB peer navigation project
- ▶ Brain Sentinel project
- ▶ EMU data base
  - Capture consortium work load and affiliate studies on Veterans
- ▶ Pharmacy
  - Levetiracetam and psychotropic medications
  - Further assessment of AED usage in VA
- ▶ Quantify VERA allocations and who/where provides epilepsy care

### Education

- ▶ Reestablish webinar series
  - Providers: six presentations
  - Veterans and caretakers: five presentations
- ▶ Federal Practitioner paper on self-management
- ▶ YouTube series
  - Women Veterans with epilepsy
  - If possible SUDEP or self-management
- ▶ TMS courses
  - Complete epilepsy mimics and AED choice presentations
  - Statistical course

### Operations

- ▶ Handbook
- ▶ Standard operating procedures for store and forward EEG
- ▶ Enhance consortium collaborations

## FY18 National ECoE Goals (Status)

FY18 Goals				
Clinical	Met Expectations	In Progress	On hold	Champion/Comment
QA/QI for women veterans with epilepsy	<b>X</b>			Lopez (Miami)
Increase store and forward EEG services		<b>X</b>		Technology workgroup; Salinsky (Portland) and McCarthy (Boston)
Increase home telehealth encounters	<b>X</b>			Increased by >60%
Standard operating procedures for remote access		<b>X</b>		Technology workgroup; Salinsky (Portland)
Meet co-morbidity management needs; bone health, general medical problems, Mental Health		<b>X</b>		
Guidelines for care coordination regarding EMU referrals.		<b>X</b>		Rutecki (Madison)
Research/Surveillance	Met Expectations	In Progress	On hold	Champion/Comment
New DOD grants regarding TBI, PNES, and epilepsy		<b>X</b>		Atalib (Connecticut), LaFrance (New Haven), and Garga (SF)
QA/QI on bone health		<b>X</b>		Van Cott (PA)
UCB peer navigation project		<b>X</b>		Hixson (SF)
Brain Sentinel Project		<b>X</b>		D. Chen (Houston), Husain (Durham), Towne (Richmond)
EMU database		<b>X</b>		Towne and Linda Benson
Pharmacy – Levetiracetam and psychotropic medications; further assessment of AED usage		<b>X</b>		Rehman (SE ECoE), Tran (Durham), and Gidal (Madison)
Quantify VERA allocations and who/where provides epilepsy care		<b>X</b>		Rehman (SE ECoE); nationally over 1.8 billion VERA epilepsy dollars.

<b>Education</b>	<b>Met Expectations</b>	<b>In Progress</b>	<b>On hold</b>	<b>Champion/Comment</b>
Reestablish Webinar 2018 series	<b>X</b>			David (Baltimore); six providers and five Veteran/caretaker webinars
Federal Practitioner paper on self-management	<b>X</b>			Hixson (SF)
You Tube series – Women with epilepsy	<b>X</b>			Lopez (Miami)
TMS courses – Epilepsy mimics and AED choice	<b>X</b>			Tortorice (PharmD)
<b>Operations</b>	<b>Met Expectations</b>	<b>In Progress</b>	<b>On hold</b>	<b>Champion/Comment</b>
Handbook		<b>X</b>		J. Chen (WLA)
Standard operating procedures for store and forward EEG		<b>X</b>		Technology workgroup, Salinsky, (Portland)
Enhance consortium collaborations		<b>X</b>		Rutecki (Madison)

## FY19 National ECoE Goals

### Operations

- ▶ Administrative staff hires
- ▶ Compliance with OIG assessments (self-assessments, MOU, external reviews)
  - Regional Advisory Committee
  - Review and update Peer Review committee in alignment with PL
- ▶ Administrative updates
  - Redraw ECoE maps to include new site(s)
  - Seek concurrence of ECoE Operations Handbook through leadership
  - Update agreement for CBT training for PNES
  - Update travel document for referral and movement between sites for specialized services for epilepsy
- ▶ Enhance consortium collaborations
- ▶ Review and seek updates with VERA allocations

### Clinical

- ▶ Increase store and forward EEG services
- ▶ Increase home telehealth encounters
- ▶ Standard operating procedure for remote access to EEG and for store and forward EEG
- ▶ Completer Guidelines for care coordination regarding EMU referrals
- ▶ Incorporate bone health assessment in clinical practice

### Research/Surveillance

- ▶ Continuation of DoD grants regarding TBI, PNES, and epilepsy
- ▶ Forward two letters of intent for basic science grants
- ▶ Bone health publication
- ▶ Women Veterans research
- ▶ UCB peer navigation project
- ▶ Brain Sentinel project
- ▶ Pharmacy publications
- ▶ Explore partnership with non-profit, commercial entities

### Education

- ▶ Webinar series and YouTube series – enhance current ones
- ▶ Federal Practitioner paper on Women Veterans
- ▶ Explore opportunities with commercial entities for Veteran and Provider education

### Outreach

- ▶ Consortium engagement
- ▶ Non-Profit partnerships
- ▶ Commercial entity partnerships

## FY19 National ECoE Goals Crosswalk

FY19 Goals					
Access		Veteran-Centric Care		Quality/Transparency	
<b>Objective 1A</b>	Enhance consortium collaborations	<b>Objective 1V</b>	Administrative updates	<b>Objective 1Q</b>	Administrative staff hires
<b>Objective 2A</b>	Guidelines for care coordination regarding EMU referrals	<b>Objective 2V</b>	Review and seek updates with VERA allocations	<b>Objective 2Q</b>	Compliance with OIG
<b>Objective 3A</b>	Consortium engagement	<b>Objective 3V</b>	Increase store and forward EEG services, CVT, and home health	<b>Objective 3Q</b>	Standard Operating Procedures for remote access to EEG and store and forward
<b>Objective 4A</b>	Non-profit and commercial entity partnerships	<b>Objective 4V</b>	Research/Surveillance goals	<b>Objective 4Q</b>	Incorporate bone health assessment in clinical practice
<b>Objective 5A</b>		<b>Objective 5V</b>	Webinar series and YouTube series – enhance	<b>Objective 5Q</b>	Standard operating procedures for store and forward EEG
Crosswalk		My VA Priorities			
1A,2A, 3A, 4A, 1V, 2V, 3V, 4V,5V, 1Q,4Q, 5Q		<b>I</b>	<b>Improve the Veteran Experience:</b> MyVA means providing Veterans with a seamless, integrated, and responsive customer service experience. VA will restructure our organization to unify our work and give Veterans a single point of access to their benefits and personal information. MyVA has developed five districts integrating VHA, NCA, VBA to enhance the Veteran experience		
1A,2A,3A, 1V,5V, 1Q,3Q,4Q, 5Q		<b>II</b>	<b>Improve the Employee Experience:</b> Employees are the face of the VA: MyVA empowers them to deliver excellent customer service to improve the Veteran experience. MyVA removes barriers our employees face in providing Veterans with timely, high-quality service, and provides employees the tools, training, and leadership development needed for success.		
1A,2A,3A, 1V,2V, 3V, 4V, 1Q, 2Q, 3Q, 4Q, 5Q		<b>III</b>	<b>Achieve Support Services Excellence:</b> MyVA has taken steps to improve our internal support services for VA employees to help them deliver exceptional customer service.		
1A,2A,3A, 1V,3V,4V, 1Q, 2Q, 3Q, 4Q, 5Q		<b>IV</b>	<b>Continuous Performance Improvement:</b> Establish a culture of continuous improvement so that problems are identified and corrected; promote use of Lean strategies for process improvement and spread best practices.		
1A,2A,3A,4A, 1V,2V, 4V, 5V, 1Q,		<b>V</b>	<b>Enhance Strategic Partnerships:</b> Expand our strategic partnerships with national and community groups to extend the reach of services available for Veterans and their families.		

(Alignment of FY18 goals with VA Goals and MYVA Priorities)\*

*\*Each of the FY18 Goals are categorized as aligning with one of the three major VA Mission goals and then crosswalked to illustrate how each of the ECoE goals supports one or more of the MYVA Priorities.*

# Centers of Excellence

Northeast		
States Covered: Virginia, W. Virginia, Ohio, Pennsylvania, Delaware, Massachusetts, New Jersey, New York, Vermont, Maine, Connecticut, Rhode Island, New Hampshire, Massachusetts, Maryland, and District of Columbia.		
• Linked Polytrauma Site: Richmond		
<b>Baltimore</b>	VA Maryland HCS	(410) 605-7414
<b>Boston</b>	VA Boston HCS	(857) 364-4745
<b>Richmond</b>	Hunter Holmes McGuire VAMC	(804) 675-5000 Ext. 3734
<b>West Haven</b>	VA Connecticut HCS	(203) 932-5711 Ext. 2420
Northwest		
States Covered: Alaska, Washington, Oregon, Idaho, Montana, Wyoming, N. Dakota, S. Dakota, Minnesota, Iowa, Illinois, Indiana, Michigan, and Wisconsin.		
• Linked Polytrauma Site: Minneapolis		
<b>Madison</b>	William S. Middleton Memorial VA	(608) 256-1901 Ext. 17728
<b>Minneapolis</b>	Minneapolis VAMC	(612) 467-4265
<b>Portland</b>	Portland VAMC	(503) 220-8262 Ext. 58330
<b>Seattle</b>	Puget Sound	(206) 277-4292
Southeast		
States Covered: Florida, Alabama, Georgia, Mississippi, Tennessee, Kentucky, S. Carolina, Puerto Rico, Arkansas, Louisiana, N. Carolina, and Missouri.		
• Linked Polytrauma Site: Tampa		
<b>Durham</b>	Durham VAMC	(919) 416-5982
<b>Gainesville</b>	Malcom Randall VAMC	(352) 376-1611 Ext. 6818
<b>Miami</b>	Miami VAHCS	(305) 575-7000 Ext. 7008
<b>Tampa</b>	James A. Haley VAMC	(813) 972-7633
Southwest		
States Covered: California, Utah, Colorado, Kansas, Nebraska, Nevada, Hawaii, Arizona, New Mexico, Texas, Oklahoma, and Philippines.		
• Linked Polytrauma Sites: Palo Alto and San Antonio		
<b>Albuquerque</b>	New Mexico VAHCS	(505) 256-2752
<b>Houston</b>	Michael E. DeBakey VAMC	(713) 794-8835
<b>San Antonio</b>	Audie L. Murphy VA Hospital	(210) 617-5161
<b>San Francisco</b>	San Francisco VAMC	(415) 379-5599
<b>West Los Angeles</b>	Greater Los Angeles HCS	(310) 268-3595

## Definition of Centers

ECoE sites and Regional Centers will be designated by the ECoE National Program as ECoE program sites or centers.

### Each ECoE – referred to as an **ECoE site**

- ▶ Offers weekly specialty Clinics in Epilepsy (not seen within a general neurology clinic)
- ▶ Providers for these clinics are trained specifically in epilepsy care
- ▶ Provide V-tel epilepsy consultation
- ▶ Provide epilepsy monitoring
- ▶ Have a single director who is an epileptologist
- ▶ Has a designated administrative support person that works within the ECoE and participates on a national level
- ▶ Participate in national ECoE initiatives and workgroups

### Each Region – referred to as an **ECoE Regional Center**

- ▶ An established network covering all Veterans in their region with a specified pathway for referral of Veterans with epilepsy to a surgical center if needed.
- ▶ Be able to see Veterans in a timely manner in accordance with VA Policy and procedures.
- ▶ Have at least one surgical center that is comparable to a NAEC level 4 center to include:
  1. Interdisciplinary and comprehensive diagnostic team approach
  2. Team to include epileptologists, neurosurgeon, neuropsychologists, nurse specialists, EEG technologists
  3. Offer complete evaluation for epilepsy surgery including Wada testing
  4. Offer neuropsychological and psychosocial treatment
  5. Offer specialized brain imaging
  6. Have fixed EMU beds that can provide Video EEG Telemetry to include: intracranial electrode, functional cortical mapping, electrocorticography
  7. Provide a broad range of surgical procedures for epilepsy
- ▶ Be involved in clinical trials
- ▶ Have a dedicated fulltime epilepsy AO who serves as part of the national team
- ▶ Has opportunities for specialized education in clinical epilepsy care

### Consortium Site

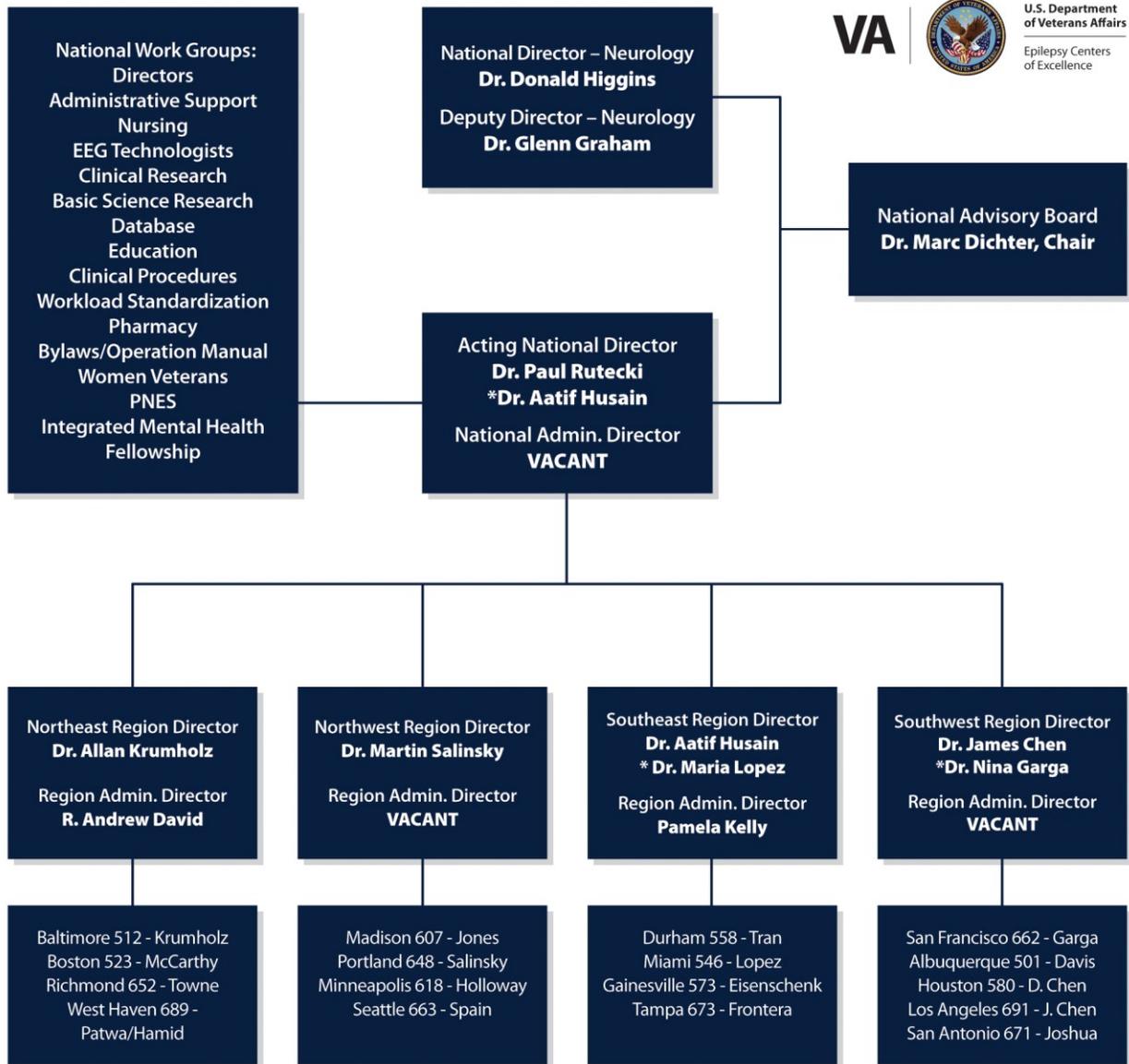
- ▶ Applies to the National ECoE for site designation and is recognized locally and nationally as a ECoE consortium site
- ▶ Has a provider specifically trained in treating and managing epilepsy
- ▶ Is linked to the ECoE network and has established administrative pathway to refer patients to ECoE
- ▶ Provides ECoE epilepsy resources to Veterans
- ▶ Available to participate in collaborate research projects
- ▶ Participates in ECoE educational programs for clinical epilepsy care
- ▶ Can participate in national ECoE initiatives and workgroups

## Regional Map



# Organization

## EPILEPSY CENTERS OF EXCELLENCE ORGANIZATION



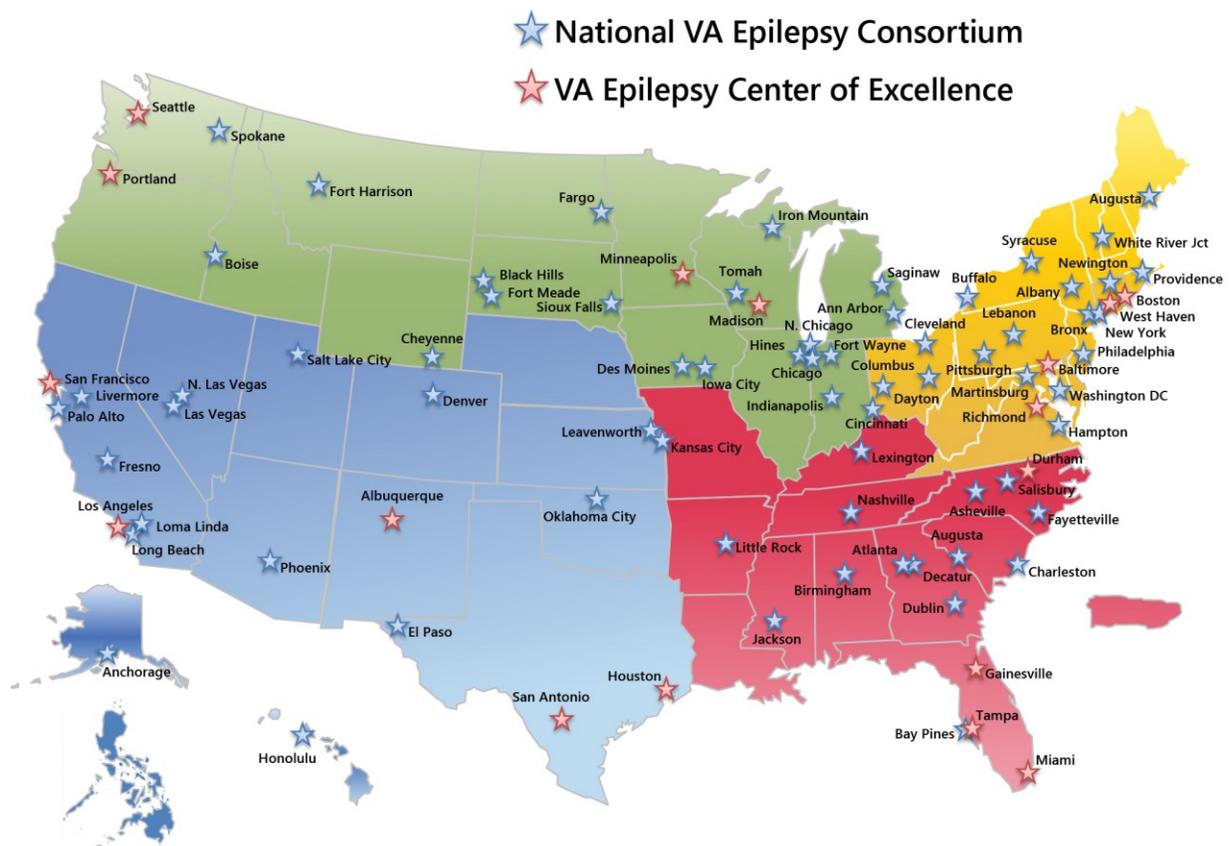
\*Effective January 1, 2019

## National VA Epilepsy Consortium

The goal of the National VA Epilepsy Consortium is to support the delivery of optimal care for Veterans diagnosed with epilepsy and seizure disorders through professional education, collaboration, and peer support across the collective VA Healthcare System. All interested VA clinicians, including epileptologists, neurologists, gerontologists, general internists, and other allied health professionals who serve Veterans with epilepsy and related seizure disorders (regardless of capacity), are invited to participate.

Together with the Epilepsy Centers of Excellence (ECoE), the National VA Epilepsy Consortium will create a hub and spoke model of care across the VA Healthcare System, expanding and streamlining the referral network for specialized epilepsy treatment, advanced neuro-diagnostics, and surgical evaluation. The Epilepsy Consortium will ensure accessibility and continuity of specialized care for Veterans regardless of locality, broadening the impact of the ECoE network. The National VA Epilepsy Consortium serves as a direct link to the 16 ECoE sites, which are staffed by epilepsy specialist or neurology clinicians, and provide administrative assistance, professional collaboration, and educational offerings in epilepsy care.

Members of the National VA Epilepsy Consortium will be offered a variety of epilepsy educational resources and updates on state-of-the-art epilepsy care from the ECoE. Additionally, Consortium members that provide more comprehensive epilepsy services to Veterans can engage with the ECoE sites to assist in the development of standardized clinical processes and procedures ensuring consistent quality of care across the VA Healthcare System.



## Inventory of Services

ECoE Inventory of Services FY18	<i>San Francisco, CA</i>	<i>Los Angeles, CA</i>	<i>Houston, TX</i>	<i>San Antonio, TX</i>	<i>Albuquerque, NM</i>	<i>Baltimore, MD</i>	<i>Boston, MA</i>	<i>Richmond, VA</i>	<i>West Haven, CT</i>	<i>Madison, WI</i>	<i>Minneapolis, MN</i>	<i>Portland, OR</i>	<i>Seattle, WA</i>	<i>Durham, NC</i>	<i>Miami, FL</i>	<i>Gainesville, FL</i>	<i>Tampa, FL</i>
Outpatient EEG	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Specialty Epilepsy Clinics	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Epilepsy Inpatient Consultation	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Scalp Video-EEG Telemetry (Phase 1), # of Beds	4	3	4	3		1	5	2	2	3	2	3	2	3	2	4	2
Epilepsy Protocol MRI Imaging	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
PET Scanning	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Magneto encephalography																	
Radio Surgery (Gamma Knife)			x														
Functional MRI (fMRI)			x	x			x	x				x					x
Ambulatory EEG		x	x	x		x	x	x	x	x	x	x	x	x	x	x	x
Epilepsy Video Telehealth Clinics	x	x	x		x	x		x	x	x	x	x	x	x	x	x	x
eConsult	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Telephone Clinics	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
SCAN-ECHO	x					x	x	x	x	x	x	x	x				
Patient Home Telehealth	x							x	x	x	x		x	x			
Store & Forward Remote EEG Reading			x	x			x					x	x	x		x	
On-Site Therapy for PNES	x		x			x	x		x			x	x	x			
NTMHC Tele-NES Provided	x		x						x	x							
Ability to Perform Wada Testing	x		x	x		x				x		x		x			
Ability for Pre-Surgical Neuropsych Testing	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Resection Surgery	x	x	x	x		x				x		x		x		x	
Intracranial Recordings: Grids/Strips	x	x	x							x		x		x			
Intracranial Recordings: Standard Depth	x	x	x							x		x		x			
Intraoperative Electroocortography (ECoG)	x	x	x									x		x		x	
Intraoperative Cortical Stimulation/Mapping	x	x	x							x				x			
Extraoperative Cortical Stimulation/Mapping	x	x	x							x		x		x			
Placement of VNS	x	x	x	x		x	x	x		x	x	x		x	x	x	x
Placement of Neuropace		x						x									
Programming Neuropace	x	x	x			x		x		x							
Deep Brain Stimulation	x	x		x				x				x		x			
Primary ECoE Contact Phone Number	415-379-5599	310-268-3595	713-794-8835	210-617-5161	505-265-1711 Ext. 2752	410-605-7414	857-364-4745	804-675-5000 Ext. 3734	203-932-5711 Ext. 4724	608-280-7044	612-467-4236	503-220-8262 Ext. 58330	206-277-1449	919-416-5982	305-575-7000 Ext. 3192	352-374-6082	813-972-7633

# ECoE Workload

## FY18 Clinical Workload

### Data Source: VSSC Encounter Cube

Data collected using ECoE stop code 345 (in the primary or credit stop code position)

Facility	Outpatient Clinic		EEG		LTM	
	Unique Patients	Unduplicated Encounters	Unique Patients	Unduplicated Encounters	Unique Patients	Unduplicated Encounters
(1V01) (523) Boston, MA HCS <sup>1</sup>	392	701	250	408	114	354
(1V01) (689) Connecticut HCS	196	388	260	266	40	83
(1V05) (512) Baltimore, MD HCS	351	534	199	219	37	195
(1V06) (558) Durham, NC HCS	497	793	221	244	38	132
(1V06) (652) Richmond, VA HCS	531	937	367	500	37	119
(2V08) (546) Miami, FL HCS	290	656	344	422	72	186
(2V08) (573) Gainesville, FL HCS	234	410	408	448	61	195
(2V08) (673) Tampa, FL HCS	240	390	705	768	83	335
(3V12) (607) Madison, WI HCS	275	540	191	205	58	259
(4V16) (580) Houston, TX HCS	771	1,350	787	1142	150	531
(4V17) (671) San Antonio, TX HCS	548	806	584	661	2	2
(5V20) (648) Portland, OR HCS	588	1,016	271	297	77	239
(5V20) (663) Puget Sound, WA HCS	541	859	431	464	50	180
(5V21) (662) San Francisco, CA HCS	207	490	89	91	92	288
(5V22) (501) New Mexico HCS	274	459	166	178		
(5V22) (691) Greater Los Angeles, CA HCS	306	611	767	830	152	405
(3V23) (618) Minneapolis, MN HCS	387	679	397	435	41	170
<b>Total</b>	<b>6,628</b>	<b>11,619</b>	<b>6,437</b>	<b>7,578</b>	<b>1,104</b>	<b>3,673</b>

<sup>1</sup> Site reported data

## Psychogenic Non-Epileptic Seizure Workload

### Data Source: Self Report

Facility	Unique Patients	Encounters
(1V01) (523) Boston, MA HCS	21	47
(1V01) (689) VA Connecticut HCS, CT	22	46
(V01) (650) Providence, RI	25	116
(1V06) (558) Durham, NC	16	52
(2V08) (546) Miami, FL HCS	9	51
(4V16) (580) Houston, TX	5	23
(5V20) (663) Puget Sound, WA HCS	2	12
(5V21) (662) San Francisco, CA	21	63
<b>Total</b>	<b>121</b>	<b>410</b>

*Unduplicated Encounters: a count of clinic stops made by patients where duplicates have been removed. A duplicate clinic stop occurs when a patient makes more than one of the same type of PRIMARY clinic stop at the same station on the same day. An encounter is a professional contact between a patient and a practitioner vested with primary responsibility for diagnosing, evaluating, and/or treating the patient's condition.*

## FY18 Telehealth Workload

### Data Source: VSSC Encounter Cube

Data collected using appropriate stop code

Facility	Video TeleHealth Clinic Local Station		Video TeleHealth Clinic Different Station		Home Video TeleHealth	
	Unique Patients	Unduplicated Encounters	Unique Patients	Unduplicated Encounters	Unique Patients	Unduplicated Encounters
(V01) (523) Boston, MA HCS <sup>1</sup>						
(V01) (689) VA Connecticut HCS, CT	6	7	7	7		
(V05) (512) Baltimore HCS, MD						
(V06) (558) Durham, NC	51	62	26	40	15	26
(V06) (652) Richmond, VA	68	85	39	46		
(V08) (546) Miami, FL	49	107				
(V08) (573) Gainesville, FL	24	34				
(V08) (673) Tampa, FL						
(V12) (607) Madison, WI	51	85	17	31	4	8
(V16) (580) Houston, TX	38	49			2	3
(V17) (671) San Antonio, TX						
(V20) (648) Portland, OR			78	112		
(V20) (663) VA Puget Sound, WA			36	38	1	1
(V21) (662) San Francisco, CA	40	69	3	5	22	47
(V22) (501) New Mexico HCS	31	42	1	1		
(V22) (691) Greater Los Angeles HCS			16	22		
(V23) (618) Minneapolis, MN	31	39	12	21	1	3
<b>Total</b>	<b>389</b>	<b>579</b>	<b>235</b>	<b>323</b>	<b>45</b>	<b>88</b>

<sup>1</sup> Site reported data

Facility	Telephone Clinic		eConsults		Store & Forward EEG*	
	Unique Patients	Unduplicated Encounters	Unique Patients	Unduplicated Encounters	Unique Patients	Unduplicated Encounters
(V01) (523) Boston, MA HCS <sup>1</sup>	242	868	46	48	99	155
(V01) (689) VA Connecticut HCS, CT	22	28				
(V05) (512) Baltimore HCS, MD	140	264	6	6		
(V06) (558) Durham, NC	35	54	2	2	154	157
(V06) (652) Richmond, VA	56	73	35	36		
(V08) (546) Miami, FL	26	28				
(V08) (573) Gainesville, FL	15	17				
(V08) (673) Tampa, FL	34	81				
(V12) (607) Madison, WI	62	142				
(V16) (580) Houston, TX	47	52	10	10		
(V17) (671) San Antonio, TX	44	74				
(V20) (648) Portland, OR	207	529	43	44	127	131
(V20) (663) VA Puget Sound, WA	112	172	23	24		
(V21) (662) San Francisco, CA	86	214	4	5		
(V22) (501) New Mexico HCS	3	3				
(V22) (691) Greater Los Angeles HCS	67	74	63	66		
(V23) (618) Minneapolis, MN	18	18	18	18		
<b>Total</b>	<b>1,216</b>	<b>2,691</b>	<b>250</b>	<b>259</b>	<b>380</b>	<b>443</b>

<sup>1</sup> Site reported data

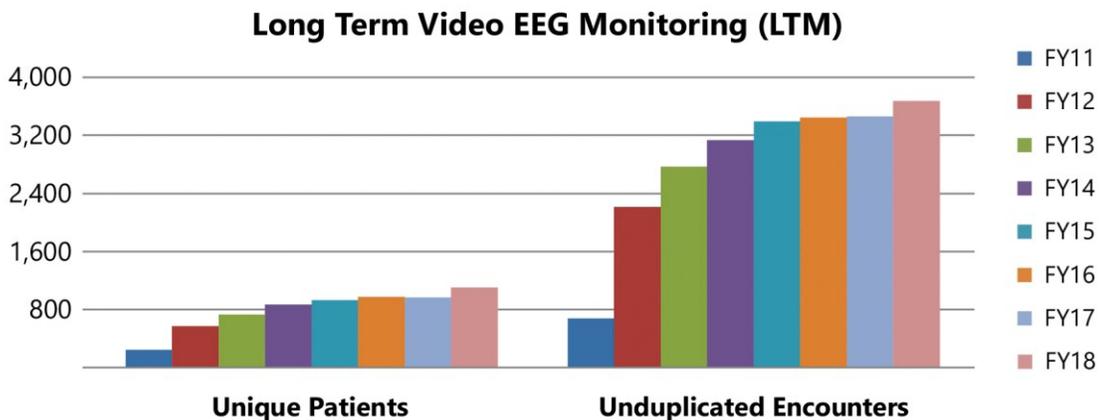
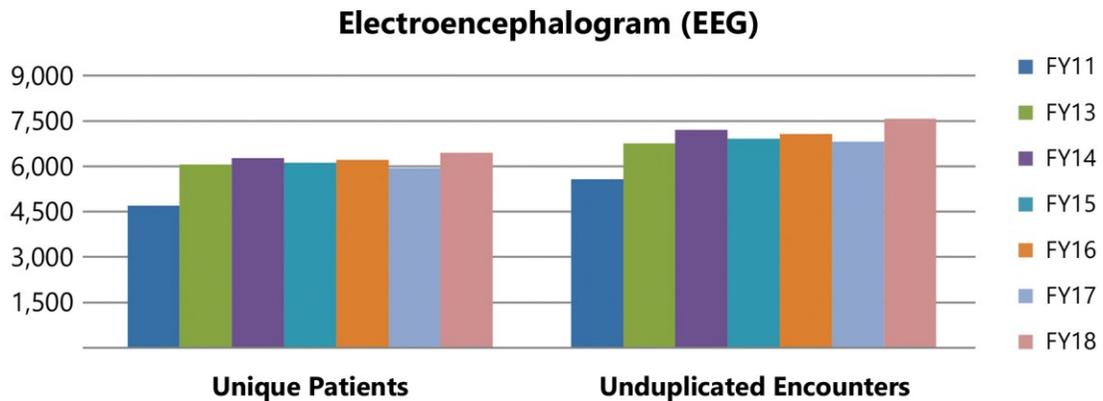
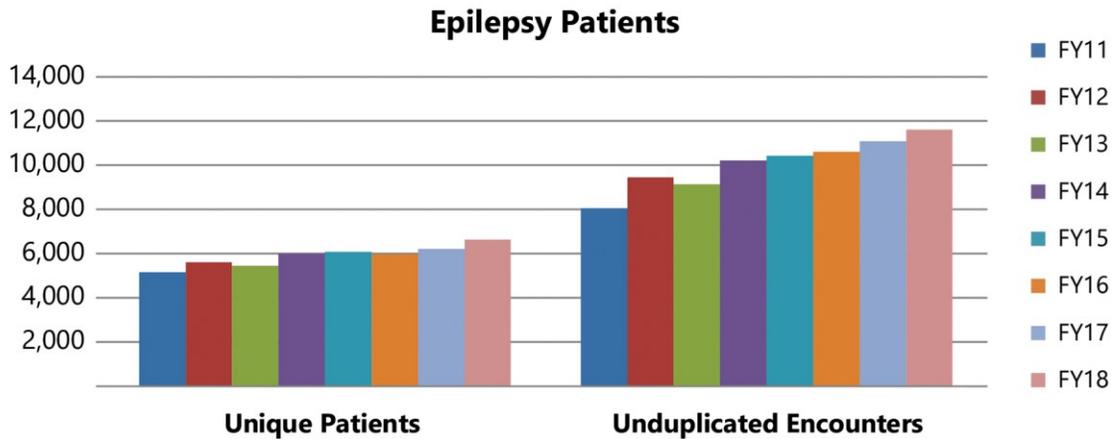
\*For Store & Forward EEG local station and different station data are combined.

## ECoE Surgery Workload

ECoE Surgery Workload FY17 to FY18	Resection Surgery		Intracranial Recordings - Grid Strip		Intracranial Recordings: Standard Depth (Free Hand)		Intracranial Recordings: StereoEEG Depths- Stereotactic		Intraoperative Electrocochography (ECoG)		Intraoperative Cortical Stimulation/Mapping		Extraoperative Cortical Stimulation/Mapping		VNS		Neuropace Implantation		DBS Implantation	
FY	17	18	17	18	17	18	17	18	17	18	17	18	17	18	17	18	17	18	17	18
(V01) (689) VA Connecticut HCS, CT																				
(V05) (512) Baltimore HCS, MD																				
(V01) (523) Boston HCS, MA																				
(V06) (558) Durham, NC																1				
(V06) (652) Richmond, VA														2	1					
(V08) (546) Miami, FL																				
(V08) (573) Gainesville, FL																				
(V08) (673) Tampa, FL																				
(V12) (607) Madison, WI	2	3	2					1								1				
(V16) (580) Houston, TX	1	2	1	1		1			1	2					2			1		
(V17) (671) San Antonio, TX																				
(V18) (501) Albuquerque, NM																				
(V20) (648) Portland, OR															1	1				
(V20) (663) VA Puget Sound, WA																				
(V21) (662) San Francisco, CA															1	1				
(V22) (691) West Los Angeles, CA	1						1	2	2	5				2	2		1	5		
(V23) (618) Minneapolis, MN																				
<b>Total</b>	<b>4</b>	<b>5</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>8</b>	<b>5</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>0</b>

## ECoE Workload Trends

### Facility Clinic Visits

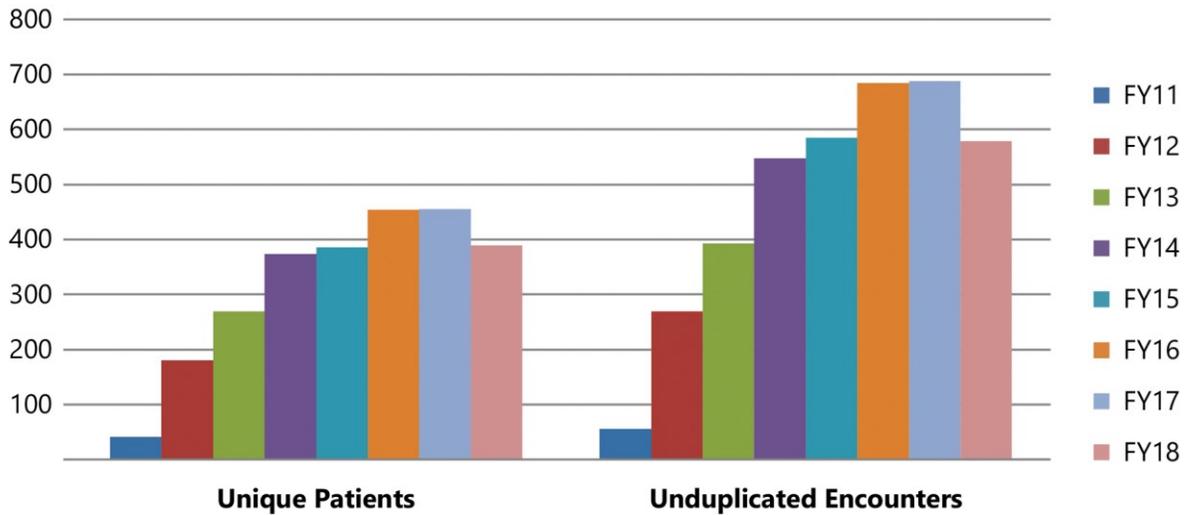


**Data Source:** VSSC Encounter Cube.

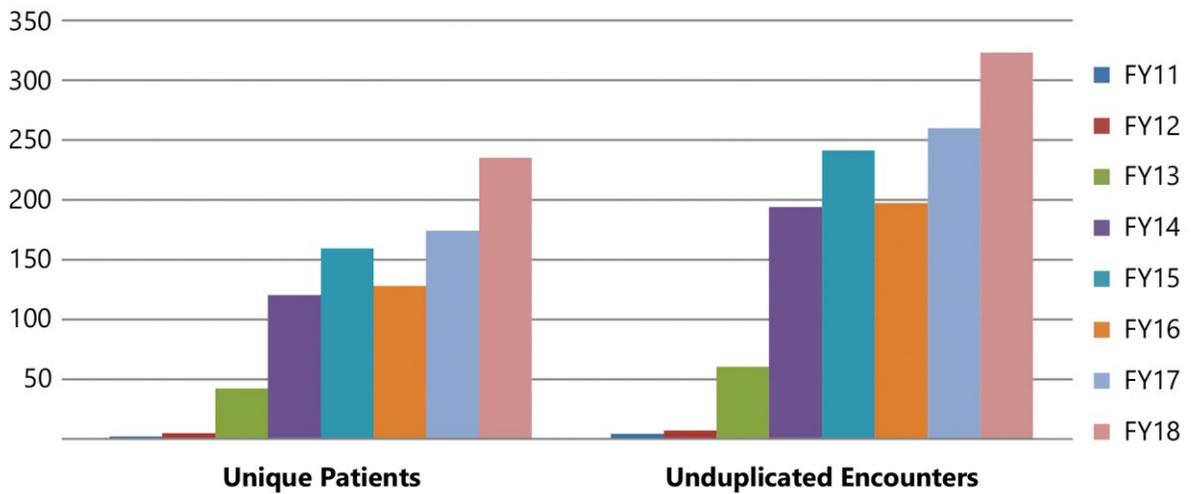
Numbers for FY11-FY12 maybe under reported due to workload capture issues. FY18 data includes self-reported workload from Boston VAMC as a new site.

## Outreach: Tele-Epilepsy

### Clinical Video Teleconference (CVT) Same Station



### Clinical Video Teleconference (CVT) Other Station

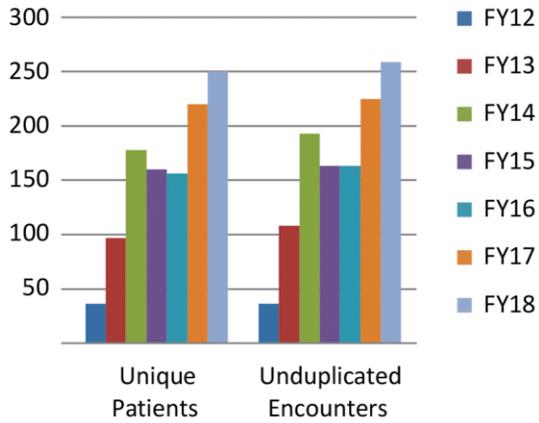


**Data Source:** VSSC Encounter Cube.

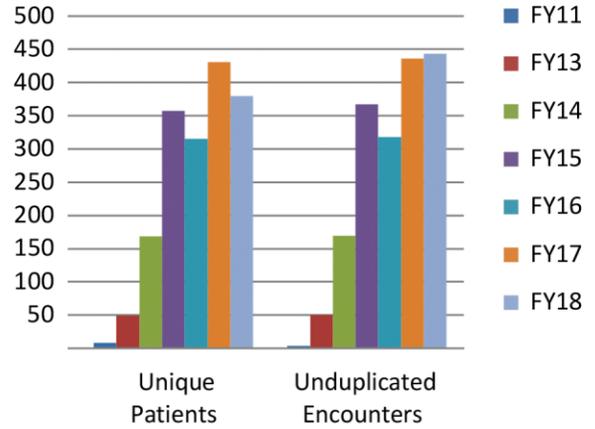
Numbers for FY11-FY12 maybe under reported due to workload capture issues.

FY18 data includes self-reported workload from Boston VAMC as a new site.

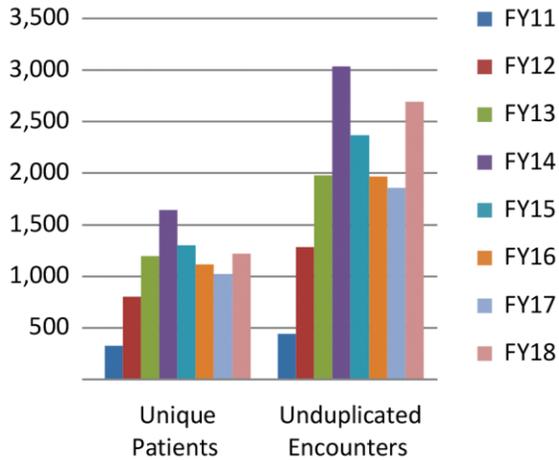
### Epilepsy Chart Consults (e-consults)



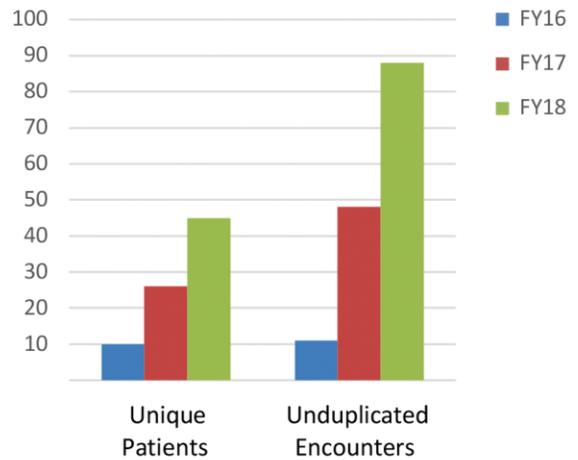
### Store & Forward EEG



### Telephone



### Home Video Telehealth



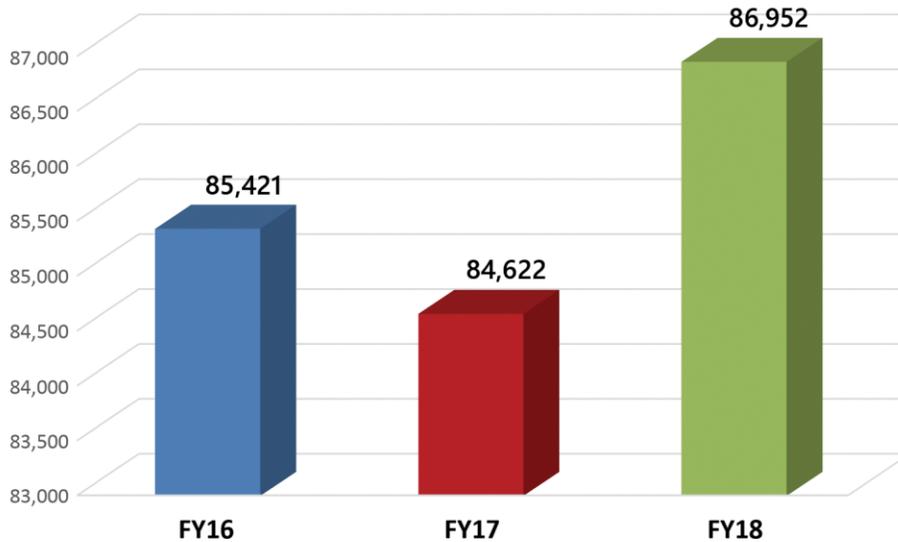
**Data Source:** VSSC Encounter Cube.

Numbers for FY11-FY12 maybe under reported due to workload capture issues.

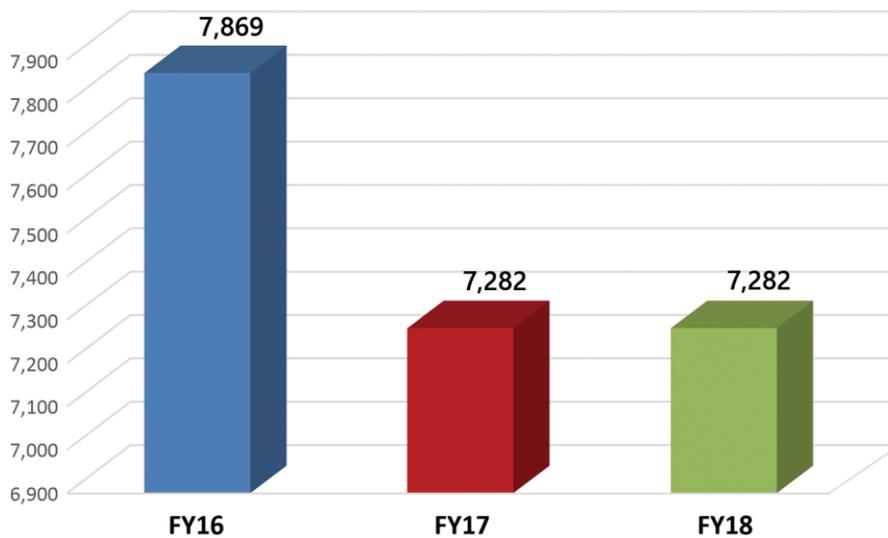
FY18 data includes self-reported workload from Boston VAMC as a new site.

## VHA Seizure, Epilepsy, Other Events Unique Patient Counts

### Seizure, Epilepsy, Transient Alteration of Awareness<sup>1</sup>



### Conversion Disorder with Seizures or Convulsions<sup>2</sup>



**Algorithm:** Data collected using ICD-10-CM codes:

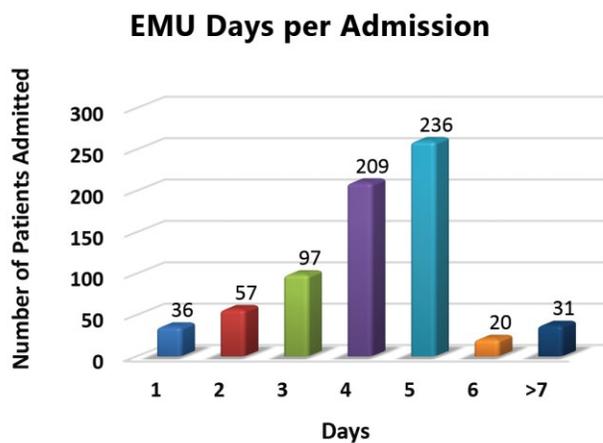
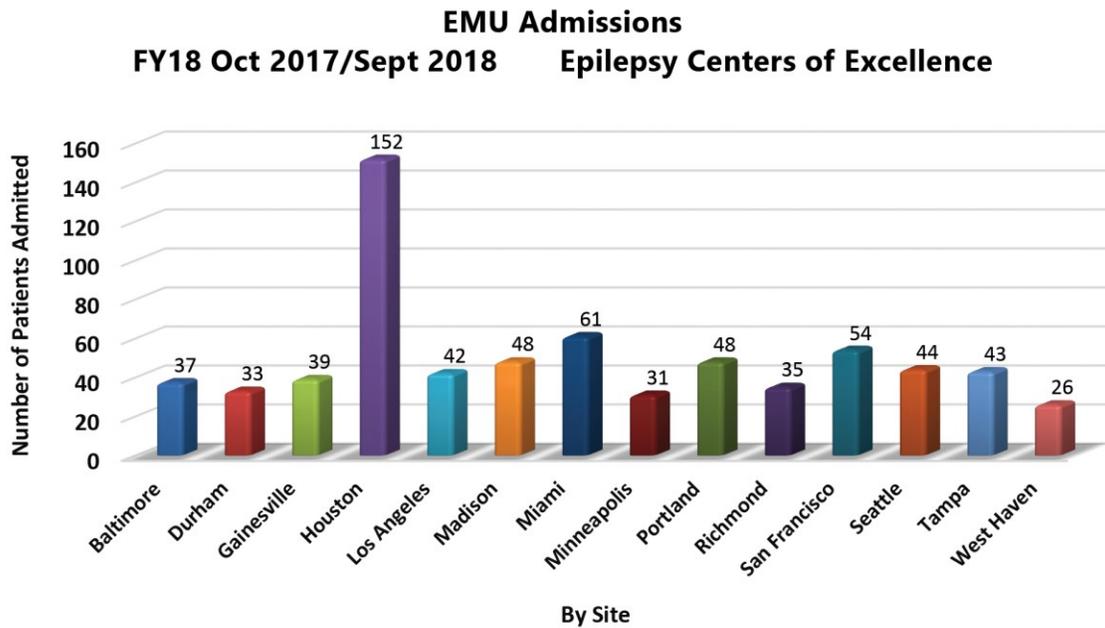
<sup>1</sup> G40.xx Epilepsy, R56.9 Unspecified Convulsion, R40.4 Transient Alteration of Awareness, R56.1 Post traumatic seizures.

<sup>2</sup> F44.5 Conversion disorder with seizures or convulsions.

**Data Source:** VSSC Diagnosis Cube: VA inpatients and/or VA outpatients.

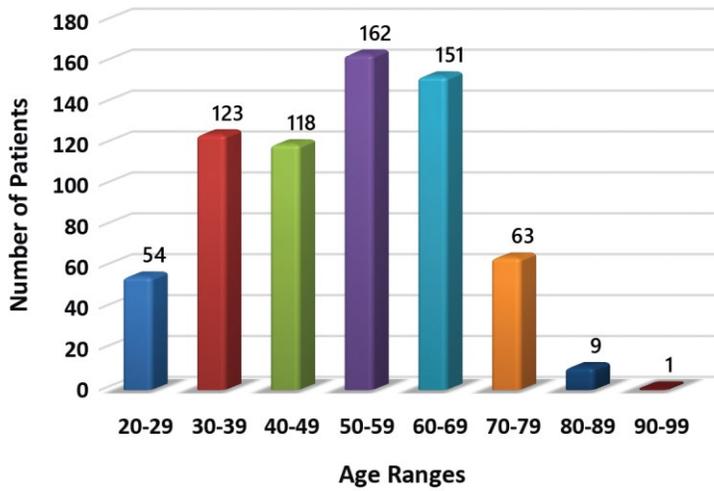
## Epilepsy Monitoring Unit Database

Each of the 14 sites reporting epilepsy monitoring unit admissions collected information on the variables; age, gender and length of stay along with monitoring classification for each visit and cumulative visits (if appropriate) and primary and secondary diagnoses. Traumatic brain injury information (when available) was also collected. The total number of reported encounters for long-term monitoring was 890 over all sites, with 693 being EMU patient admissions.



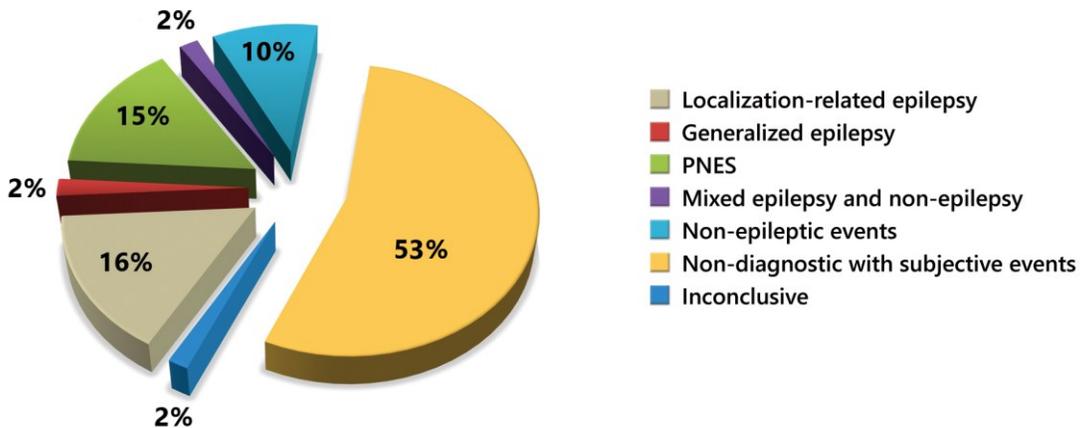
The median length of stay was five days with a maximum of 11 days and overall site admissions totaling 2820 days.

### Admissions by Age



EMU admission ages ranged from 20-93 years with median ages between 50-59 with the majority (80%) of known gender patients being male.

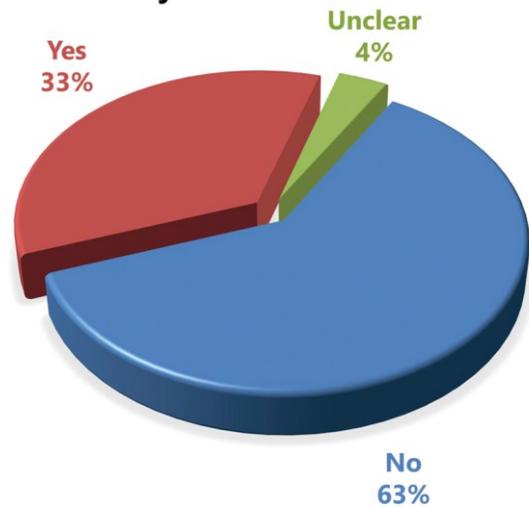
### EMU Diagnostic Classifications



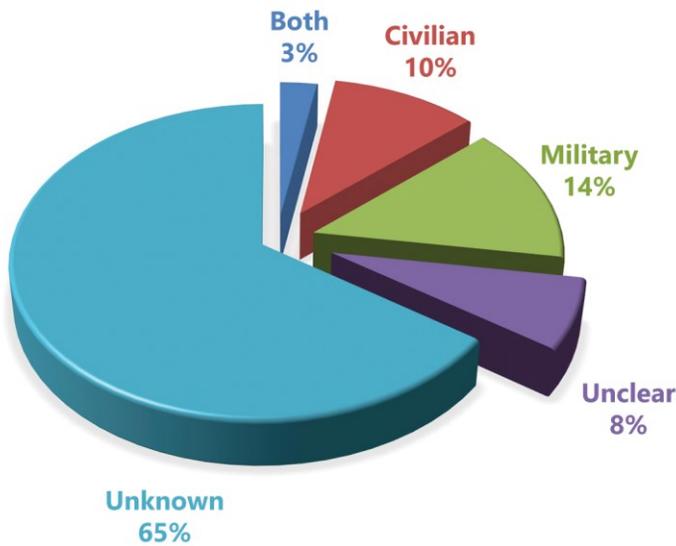
This chart highlights the seizure classifications most encountered in the EMUs. Classification categories most observed were: localization related epilepsy with ictal EEG changes (14%), PNES (15%), and the inconclusive category with subjective events (54%) felt to represent seizures with indefinite electrographic evidence. The inconclusive category (2%) could not be classified in any of the listed categories.

Approximately 33% of patients admitted to the EMU had a reported traumatic brain injury in the medical record. In 4% of admissions it was not possible to determine if the patients had suffered a TBI.

### TBI History



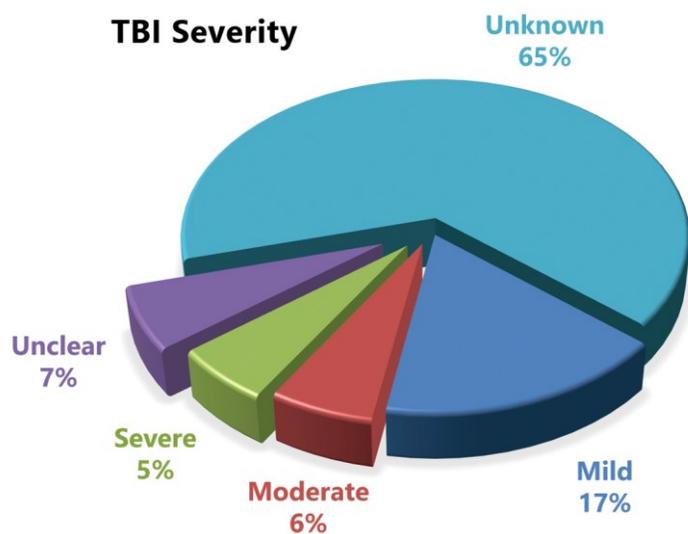
### TBI Source



Military trauma was the largest source of brain injury in patients at 14% followed by civilian TBI at 10%. In 73% of cases, the source of brain injury was either unclear or undetermined.

The percentage of EMU admissions classified by the severity of a traumatic brain injury is shown in this chart. For 65% of patients it was not possible to determine the severity of the traumatic brain injury.

### TBI Severity



## VHA FY17 Patient Counts

Cohort	Epilepsy Patients, %		All VA Patients, %	
<b>All Patients</b>	<b>79,361</b>		<b>6,171,689</b>	
<b>Age &lt;45</b>	11,059	13.9%	1,141,749	18.5%
<b>45 ≤ Age &lt;65</b>	29,294	36.9%	1,854,449	30.3%
<b>Age ≥ 65</b>	39,008	49.2%	3,175,491	51.5%
<b>Males</b>	<b>72,567</b>		<b>5,530,715</b>	
<b>Age &lt;45</b>	8,979	12.4%	873,456	15.8%
<b>45 ≤ Age &lt;65</b>	25,602	35.3%	1,561,194	28.2%
<b>Age ≥ 65</b>	37,986	52.3%	3,096,065	56.0%
<b>Females</b>	<b>6,794</b>		<b>640,974</b>	
<b>Age &lt;45</b>	2,080	30.6%	268,293	41.9%
<b>45 ≤ Age &lt;65</b>	3,692	54.3%	293,255	45.8%
<b>Age ≥ 65</b>	1,022	15.0%	79,426	12.4%

OEF/OIF/OND Patient Counts				
<b>All Patients</b>	<b>5,299</b>		<b>610,639</b>	
Age <45	4,214	79.5%	452,699	74.1%
45 ≤ Age <65	1,054	19.9%	152,060	24.9%
Age ≥ 65	31	0.6%	5880	1.0%
<b>Males</b>	<b>4,766</b>		<b>540,045</b>	
Age <45	3,795	79.6%	399,170	73.9%
45 ≤ Age <65	944	19.8%	135,372	25.1%
Age ≥ 65	27	0.6%	5,503	1.0%
<b>Females</b>	<b>533</b>		<b>70,594</b>	
Age <45	419	78.6%	53,529	75.8%
45 ≤ Age <65	110	20.6%	16,668	23.6%
Age ≥ 65	4	0.8%	377	0.5%
	Epilepsy: Males 91.4%, Females 8.6%		All VA: Males 89.6%, Females 10.4%	

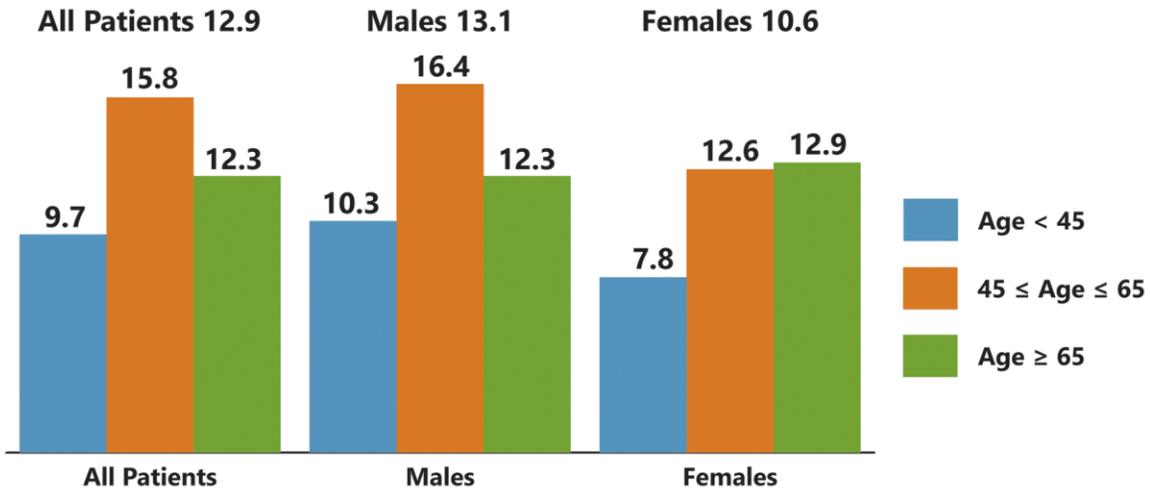
**Algorithm:** Patients prescribed at least thirty days of anti-epileptic drugs in FY17 cross matched with seizure diagnosis (ICD-09-CM 345.xx, 780.39, ICD-10-CM G40.xxx, R40.4, R56.1, R56.9) during FY15-FY17. **Diagnoses data from EEG and LTM clinics were excluded. Estimated positive predictive value of 85.1% from chart review of 625 patients (95% confidence interval: 82.1% to 87.8%).**

**Data Sources:** CDW (inpatient and/or outpatient encounters), VSSC Unique Patients Cube (inpatient and/or outpatient encounters) and Pharmacy Benefit Management (PBM).

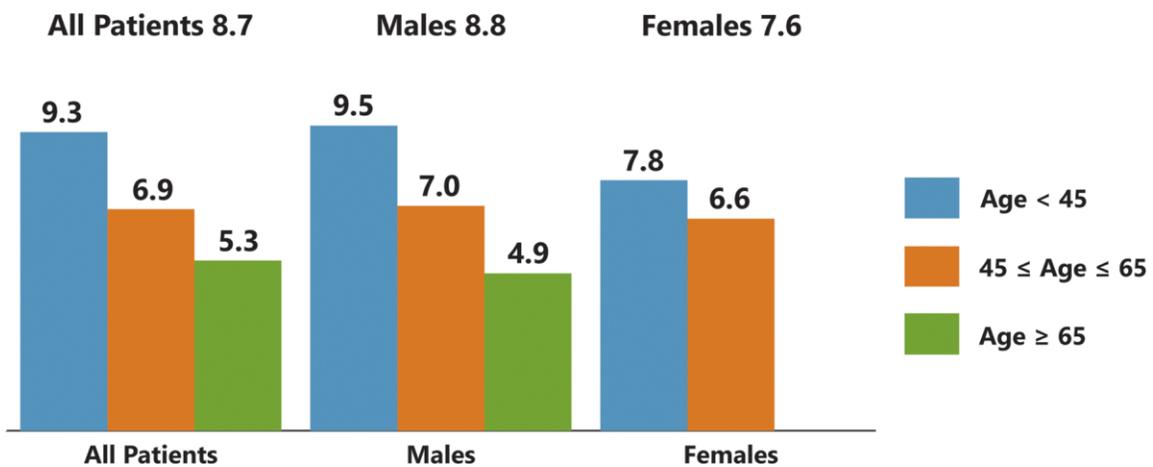
Numbers rounded to the nearest one decimal digit for percentages. **Unknowns have been excluded from the analysis.**

## VHA FY17 Epilepsy Prevalence Estimates

### A. Prevalence per 1,000 Patients



### B. OEF/OIF/OND Prevalence



**Algorithm:** Patients prescribed at least thirty days of anti-epileptic drugs in FY17 cross matched with seizure diagnosis (ICD-09-CM 345.xx, 780.39, ICD-10-CM G40.xxx, R40.4, R56.1, R56.9) during FY15-FY17. **Diagnoses data from EEG and LTM clinics were excluded. Estimated positive predictive value of 85.1% from chart review of 625 patients (95% confidence interval: 82.1% to 87.8%).**

**Data Sources:** CDW (inpatient and/or outpatient encounters), VSSC Unique Patients Cube (inpatient and/or outpatient encounters) and Pharmacy Benefit Management (PBM).

Numbers rounded to the nearest one decimal digit for percentages. **Unknowns have been excluded from the analysis.**

# Outreach

## Operations

- ▶ Expansion of telehealth services nationally, CVT, CVT-Home, Tele-EEG
- ▶ PNES services provided by VA ECoE trained professional in all four Regions

## Social media

- ▶ Website updates ongoing [www.epilepsy.va.gov](http://www.epilepsy.va.gov)
- ▶ VHA ECoE recognized on the National Association of Epilepsy Centers website
- ▶ VA Caregiver website includes link for Epilepsy website

## Partnerships

- ▶ ECoE Partnering with Epilepsy Foundation on activities associated with the Connectors Provider Outreach Program
- ▶ ECoE Consortium open membership
- ▶ Member of Epilepsy Leadership Council (American Epilepsy Society)
- ▶ Partner with CSR (Center for SUDEP research)
- ▶ Non-Profit Education and Training Sponsorships – Brain Sentinel, Eisai, LivaNova, Natus, Sunovion, UCB, Upsher-Smith

## IRB Sponsored Studies

- ▶ Peer navigation Program UCB
- ▶ Detecting PNES – Brain Sentinel
- ▶ Neuropace

## Education

- ▶ Epilepsy Basic Training Series for patients and care givers (*see page 95*)
- ▶ CME Provider series (*see page 95*)
- ▶ AED Physician Pocket Card revision (women focus addendum)
- ▶ Epilepsy Manual 2nd edition

## Awareness Issues

- ▶ Representation at National Epilepsy Awareness Day
- ▶ *Purple Day* events – Participants in Genius Book of World Records largest training
- ▶ Multiple patient education events
  - ECoE/Duke Patient education symposium
  - Epilepsy Foundation and ECoE collaborative meetings

# New Policy

**Department of Veterans Affairs Veterans  
Health Administration Washington, DC 20420**

**VHA DIRECTIVE 1215  
Transmittal Sheet February 14, 2017**

## **Standards for Veterans Health Administration Centers of Excellence**

**1. Reason for Issue:** This Veterans Health Administration (VHA) directive provides policy and direction for establishing standards and guidelines for VHA Centers of Excellence (COE) and ensuring that VHA COE meet those standards.

**2. Summary of Content:** This new directive establishes standards for the creation and continuation of VHA COE.

**3. Related Issues:** None.

**4. Responsible Office:** The VHA Chief of Staff (10B) is responsible for content of this VHA directive. Questions should be addressed to the Office of the Chief of Staff at 202-461-7016.

**5. Recertification:** This VHA directive is scheduled for recertification on or before the last working day of February 2022. This VHA directive will continue to serve as national VHA policy until it is recertified or rescinded.

**David Shulkin, M.D.**  
Under Secretary for Health

**Distribution:** Emailed to the VHA Publications Distribution List on February 23, 2017.

## Efforts to Meet VHA Directive 1215

### I. VACO COE Task Force (June 2018) Recommendations to Meet Expectations for New Policy

- ▶ Funding:
  - The Task Force recommends that funds supporting the Mental Health, Neurology, and Polytrauma CoEs continue.
- ▶ Oversight:
  - The Task Force recommends a vigorous and transparent review process for CoEs, made up of both subject matter experts and field representation. This review process should include input from the local host site and network with oversight for the review process managed by the National Program Office.
- ▶ VERA Modification:
  - For the CoEs with a primary mission of providing direct clinical care, the Task Force recommends that the responsible VACO program office(s) ensure that VERA funding directly supports services where they are provided.
- ▶ Program Office Review:
  - The Task Force recommends that each responsible National Program Office conduct a review of all CoEs under their purview by June 2019, to be repeated no less than every five years.
- ▶ Establishing New CoEs:
  - The Task Force recommends creation of a process for the establishment of new CoEs that spells out clear standards for the funding model, goals and objectives of the new CoE, performance reviews and oversight, scope, sustainment expectations—i.e. what the source of sustainment funds will be: research funding, VERA, etc.,—and what criteria for success will be measured.
- ▶ Communication Plan:
  - The Task Force recommends that the responsible National Program Offices, in coordination with individual CoEs and field host sites, undertake a concerted communication effort to raise the profile of all CoEs nationally, and to better publicize their accomplishments and value generated.

## II. Scoring of Performance Standards (all four sites meet or exceeded Target for 2017)

<b>Administrative Standards</b> (Remediation plan required if MOU, Self-Assessment, and Advisory Committee standards not attained)				
	<b>Description</b>	<b>Scoring</b>	<b>Target</b>	<b>Max</b>
<b>MOU</b>	Negotiate Memorandum of Understanding by no later than October 15, 2018 signed by CoE Director, VAMC Director, VISN Director and Neurology National Director. MOU specifies expectations for the coming year. This will include how the CoE through research, educational and clinical innovation/demonstration activities, will address one or more of the VA strategic priorities during FY2018, and specify the resources that will be provided by the host VAMC to the CoE	Yes = 1	1	1
<b>Self-Assessment</b>	Per VHA Directive 1215 COE Standards – the CoE will submit an annual self-assessment no later than 30 days after the end of the fiscal year	Yes = 1	1	1
<b>Advisory Committee</b>	Per Public Law – each CoE will meet with the Local Advisory Committee at least annually	Yes = 1	1	1
<b>Collaborations, Partnerships, Work Groups</b>	Engagement with VA and non-VA stakeholders in regional/national effort to improve the specialized care available to Veterans	Yes = 1	1	1
		<b>Max = 4</b>	<b>Target = 4</b>	<b>Subtotal = 4</b>

Research Standards				
	Description	Scoring	Target	Max
<b>Research Projects</b>	IRB and/or IACUC approved protocols	1 = 1 2 = 2 3 = 3 ≥4 = 4	≥1	4
<b>Research Projects</b>	Collaborative Multi-site Research Projects	1 = 1 2 = 2 3 = 3 ≥4 = 4	≥1	4
<b>Research Papers</b>	Paper(s) authored/co-authored by a CoE investigator for COE-related research in a peer-reviewed publication	1 = 1 2 = 2 3 = 3 ≥4 = 4	≥1	4
<b>Research Posters</b>	Poster presentation(s) concerning a topic relevant to the research mission of the CoE during the reporting year	1 = 1 2 = 2 3 = 3 ≥4 = 4	≥2	4
		<b>Max = 16</b>	<b>Target = ≥6</b>	<b>Subtotal = 16</b>

Education Standards: Professional				
	Description	Scoring	Target	Max
<b>Grand Rounds Presentations</b>	Grand rounds presentation(s) at a VA/non-VA facility related to CoE activity	1 = 1 2 = 2 3 = 3 ≥4 = 4	≥1	4
<b>Invited Lectures</b>	Presentation(s) at conference/symposium related to CoE activity	1 = 1 2 = 2 3 = 3 ≥4 = 4	≥2	4
<b>Conferences</b>	Conference(s), webinar(s) and other educational sessions with CoE Consortium sites	1 = 1 ≥3 = 2 ≥5 = 3 ≥10 = 4	≥2	4
<b>Fellowship Program</b>	Clinical Fellows in CoE	1 = 1 2 = 2 3 = 3 ≥4 = 4	≥1	4
<b>Other Trainee Programs</b>	Medical Students Residents Allied (nurses, psychology, etc.)	Yes = 1 Yes = 1 Yes = 1	≥1	3
		<b>Max = 19</b>	<b>Target = ≥7</b>	<b>Subtotal = 19</b>

Education Standards: Patient/Caregiver				
	Description	Scoring	Target	Max
<b>Patient/Caregiver Programs</b>	Educational program(s) for patients and caregivers	1 = 1 ≥3 = 2 ≥5 = 3 ≥10 = 4	≥2	4
<b>VA Support Groups</b>	Support groups for Veterans and Veterans' caregivers	1 = 1 ≥3 = 2 ≥5 = 3 ≥10 = 4	≥2	4
<b>44 Community Engagement</b>	Participation in local community programs such as support groups	1 = 1 ≥3 = 2 ≥5 = 3 ≥10 = 4	≥2	4
		<b>Max = 12</b>	<b>Target = ≥6</b>	<b>Subtotal = 12</b>

Clinical Standards				
	Description	Scoring	Target	Max
<b>Improve Timeliness of Services</b>	CoE will see consults within 30 day of the provider/patient indicated date	100% = 1	1	1
<b>Quality Improvement</b>	Chart reviews Review of 10 randomly selected charts for each provider and evaluated by accepted disease-specific quality care standards	≥95% Level 1 = 1	1	1
<b>Overall Clinical Productivity</b>	Unique patient encounters during the reporting period. Please provide raw data for following categories: VAMC (care for Veterans assigned to medical center) VISN (care for Veterans receiving care at other sites in VISN) Extra-VISN (care for Veterans from outside VISN)	≥100 = 1 ≥250 = 2 ≥500 = 3 ≥1000 = 4		

<b>Specialist Clinical Services</b>	Chemodenervation	Present at CoE = 1		
	Infusion Services	Present at CoE = 1		
	Inpatient epilepsy monitoring	Present at CoE = 1		
	Functional neurosurgery (DBS, VNS, RNS, etc.)	Present at CoE = 1		
<b>Virtual Care</b>	Proportion of encounters performed using virtual modalities. Please provide raw data for the following categories: Electronic Consultation Store & Forward Telehealth Clinical Video Telehealth CBOC Interfacility Home	≥2% = 1 ≥5% = 2 ≥10% = 3 ≥20% = 4		
<b>Innovative Clinical Demonstration Developed</b>	Clinical demonstration project(s), improving care of Veterans, initiated during the report year	≥1 = 1		
<b>Innovative Clinical Demonstration Evaluated</b>	Clinical demonstration project(s), improving care of Veterans, evaluated during the report year	≥1 = 1		
<b>Innovative Clinical Demonstration Disseminated</b>	Clinical demonstration project(s), improving care of Veterans, disseminated during the report year	≥1 = 1		
		<b>Max = 17</b>		<b>Subtotal = 9</b>

<b>Total Max = 68</b>	<b>Total Target = 32</b>
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# Northeast Region

**Allan Krumholz, MD,**  
Northeast ECoE Regional Director

**R. Andrew David, MS, MHSA**  
Northeast ECoE Regional Administrative Director



Northeast



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## Northeast Region

Regional Director: Allan Krumholz, MD

Regional Administrative Officer: Linda Benson, MPH (while Andrew David is on Detail)

### FY18 SELF-ASSESSMENT RESULTS:

- ▶ Final Score – The Region’s 2018 Self-Assessment met or exceeded target score.
- ▶ Highlights: a new Northeast was reviewed vetted by ECoE Standards and was accepted. The Boston VA will become an additional fourth Northeast Epilepsy Center Site for 2019.
- ▶ Concerns/Issues: The Regional epilepsy surgical volumes for our Northeast sites are not rising, in part, because several sites refer complex or other epilepsy surgery procedures to their University Hospital Affiliates or to VA ECoEs in other national regions.

### FY18 ACCOMPLISHMENTS:

- ▶ Added Boston VA as a fourth site in the NE ECoE Region.
- ▶ Continued clinical and research collaboration with the Richmond Polytrauma Program.
- ▶ Richmond VA increased referrals from Polytrauma and is expanding its CVT program.
- ▶ National/Regional Educational programs - Hans Berger Symposium hosted by Richmond VA.
- ▶ West Haven (Connecticut) VA started DoD Funded PNES research project (Dr. Altalib).
- ▶ West Haven (Connecticut) VA faculty awarded VISN-1 CDA to study motivational interviewing for Veterans with PNES (Dr. Tolchin).
- ▶ Held virtual Northeast Advisory Board meeting in February 2018.
- ▶ Baltimore VA expanded Ambulatory EEG to Perry Point campus (~1hr N of Baltimore campus).
- ▶ Baltimore VA Neuropsychologist Dr. Mordecai completed training with Dr. LaFrance for CBT for PNES and is initiating a care program at the site.
- ▶ West Haven (Connecticut) VA Obtained backup server for VACHS EEG server to ensure long-term retention of patient EEG records.
- ▶ Held NE Regional Consortium Virtual Meeting.

### FY19 GOALS:

- ▶ Integrate VA Boston as new ECoE site including that site using ECoE stop codes.
- ▶ Complete UCB sponsored Peer Support Research Project at VA Richmond and VA Baltimore.
- ▶ Expand VA Baltimore monitoring unit to two beds.
- ▶ Establish pilot or preliminary data for DoD sponsored research and CDA at West Haven (Connecticut) VA.
- ▶ Establish regular SCAN ECHO or teleconferencing for regional referrals and education.
- ▶ Support and participate in Epilepsy Foundation programs in our regions.
- ▶ Develop plans for a future NE ECoE Regional Advisory Group consistent with VA standards.
- ▶ Strengthen and expand collaboration with NE Region VA Consortium Facilities.

### OTHER FUTURE INITIATIVES:

- ▶ Baltimore VA plans to initiate long term EEG for select patients outside of the Epilepsy Monitoring Unit.
- ▶ Continued expansion of VA Boston Tele EEG Network, with addition of 2-3 new sites.
- ▶ Boston VA plans deployment of Tele-Ambulatory EEG in all centers on its Tele-EEG network.
- ▶ Boston plans expansion of its PNES clinic services.

## Baltimore Fellowships

Name	Fellowship	ACGME	VA FTE	Start Date	End Date
Miguel Melo-Bicchi, MD	Polytrauma/ TBI	No	1.0	July 1, 2018	June 30, 2019
Elsie Achieng, MD	Clinical Neurophysiology	Yes	0.0	July 1, 2018	June 30, 2019
Jennifer Haagensen, DO	Clinical Neurophysiology	Yes	0.0	July 1, 2018	June 30, 2019
Jennifer Haagensen, DO	Polytrauma/ TBI	No	1.0	July 1, 2017	June 30, 2018
Ahmareen Baten, MD	Clinical Neurophysiology	Yes	0.0	July 1, 2017	June 30, 2018
Miguel Melo Bicchi, MD	Clinical Neurophysiology	Yes	0.0	July 1, 2017	June 30, 2018

## Boston Fellowships

Name	Fellowship	ACGME	VA FTE	Start Date	End Date
Mauricio Villamar	Epilepsy	Yes	.33	July 1, 2018	June 30, 2019
Vidita Khatri	Epilepsy	Yes	.33	July 1, 2018	June 30, 2019
Behnaz Esmaeili	Epilepsy	Yes	.33	July 1, 2018	June 30, 2019

## Richmond Fellowships

Name	Fellowship	ACGME	VA FTE	Start Date	End Date
Diana Oyoung-Oliver, DO	Epilepsy	Yes	0.30	June 2018	May 2019

## Publications/Presentations | Northeast Region

### Baltimore

#### ■ PUBLICATIONS/MANUSCRIPTS/CHAPTERS:

Ma, B. B., Bloch, J., Krumholz, A., Hopp, J. L., Foreman, P. J., Soderstrom, C. A., ... Krauss, G. L. (2017). Regulating drivers with epilepsy in Maryland: Results of the application of a United States consensus guideline. *Epilepsia*, 58(8), 1389-1397. doi:10.1111/epi.13804.

Khambhati, A. N., Bassett, D. S., Oommen, B. S., Chen, S. H., Lucas, T. H., Davis, K. A., & Litt, B. (2017). Recurring functional interactions predict network architecture of interictal and ictal states in neocortical epilepsy. *Eneuro*. doi:10.1523/eneuro.0091-16.2017.

Pritchard JM & Hopp JL. (2017). Epidemiology of Seizures in Critically Ill Adults. Continuous EEG Monitoring: Principles and Practice, 1st edition. Husain & Sinha, eds., *Springer International Publishing*: Chapter 2.

Krumholz, A., & Ness, P. M. (2018). Blood donors with epilepsy continue to face unjustified discriminatory practices. *Vox Sanguinis*, 113(6), 605-606. doi:10.1111/vox.12673.

Krumholz, A., & Berg, A. T. (2018). Epilepsy and transportation. *Neurology*, 90(13), 583-584. doi:10.1212/wnl.0000000000005197.

Sanchez AM. & Krumholz A. (September 2018). Driving and Epilepsy: Issues to Discuss with Your Patients. *Neurology Times*.

Hopp JL & Atallah CC. (2018). Electrodes and Montages. Handbook of ICU EEG Monitoring, *Demos Medical Publishing*, p11-18.

Kabir A. & Krumholz A. (2018). Semiology of Epilepsy. In: Husain and Tran eds. Department of Veterans Affairs Epilepsy Manual. Second Editions Published by Epilepsy Centers of Excellence, *Department of Veterans Affairs* Washington, DC.

#### ■ ABSTRACTS / POSTERS / PRESENTATIONS:

Pritchard, JM, Elnour, H, & Hopp, JL. (December 2017). Health Locus of Control and Psychogenic Nonepileptic Seizure Frequency. *American Epilepsy Society Annual Meeting*, Washington, DC.

Haagensen J, Chen SH, Hopp JL, Li A, & Sarma S. (May 2018). Use of a quantitative algorithm to help predict seizure lateralization in a patient with bitemporal epilepsy and responsive nerve stimulation. Poster presentation at the *American Clinical Neurophysiology Society Meeting*. Washington, DC.

Krumholz A. (July 2018). Epilepsy and Driving. *ECoE Patient/Caregiver Conference*.

Krumholz A. (September 2018). Evaluation and Management of a First Seizures. *Epilepsy Continuing Education ECoE Clinician Webinar*.

Pritchard J. (April 2018). Update in Neurology: Epilepsy. *University of Maryland Neurology Grand Rounds*, Baltimore, Maryland.

Pritchard JM, Elnour H, & Hopp JL. (December 2017) Health Locus of Control and Psychogenic Nonepileptic Seizure Frequency (Abst. 3.345). *American Epilepsy Society*. Washington, DC.

Jeffries K, Thompson S, & Hopp J. (December 2017). Evaluating Peri-ictal Mood Changes in Epileptic Patients in the Epilepsy Monitoring Unit (Abst. 2.246). *American Epilepsy Society*. Washington, DC.

Haagensen JJ, Hopp JL, et al., (December 2017). Identifying the epileptogenic zone using the concept of network fragility (Abst. 2.330). *American Epilepsy Society*. Washington, DC.

Krumholz A, Hopp JL, Krauss G, et al. (December 2017). Analysis of the Implementation, Outcomes, and Effectiveness of the United States Consensus Driving Licensure Regulatory Guidelines for Seizures and Epilepsy as Applied in the State of Maryland (Abst. 1.414). *American Epilepsy Society*. Washington, DC.

Haagensen JJ, Chen S, Hopp JL, Li A, & Sarma S. (May 2018). Use of a Quantitative Algorithm in a Patient with Bitemporal Epilepsy and Responsive Neurostimulation. *American Clinical Neurophysiology Society*. Washington, DC.

Hopp JL. (2018). Psychogenic Seizures: Updates in identification and management. *Walter Reed National Military Medical Center and the Uniformed Health Services University of the Health Sciences*, Bethesda, Maryland.

Hopp JL. (December 2017). How to Practically Convert a fellowship from Clinical Neurophysiology to Epilepsy. *American Epilepsy Society 71st Annual Meeting (AES)*, Epilepsy Fellowship Directors Session, Washington, DC.

## Boston

#### ■ PUBLICATIONS / MANUSCRIPTS / CHAPTERS:

Weber, D., McCarthy, D., & Pathmanathan, J. (2016). An effective automated method for teaching EEG interpretation to neurology residents. *Seizure*, 40, 10-12. doi:10.1016/j.seizure.2016.05.009.

Riley, C. L. (2017). Waveform Window #41: Fact or Artifact, 3rd Edition. *The Neurodiagnostic Journal*, 57(3), 240-255. doi:10.1080/21646821.2017.1347455.

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■ **ABSTRACTS / POSTERS / PRESENTATIONS:**

McCarthy, DC, Saxena, A, & Riley, C. (2018). There's No Place Like home. The Boston VA Tele-Ambulatory EEG Initiative. *VA Innovation Summit Meeting*, Marlboro MA.

McCarthy, DC, Saxena, A, & Riley, C. (2018). The Boston VA Tele-Ambulatory EEG initiative. National VA Innovation Meeting. Washington, DC.

Saxena, A. (2018). Establishing a mind-body Clinic at VA Boston Healthcare System. Section Meeting Neuro Health and Integrative Neurology; *AAN*. Los Angeles, CA.

## Richmond

■ **PUBLICATIONS / MANUSCRIPTS / CHAPTERS:**

Ryan MS, Bradner M, Lee B, Waterhouse E, Rigby F, & Grossman C. (submitted 2018). *Improving Student Performance on Step 2 Clinical Skills: Results from a Pilot Program*.

Hixon J, Kelly, P, & Towne AR. (April 2018). Self-Management in Epilepsy. *Federal Practitioner*.

Waterhouse, E. J. (2017). The Epidemiology of Status Epilepticus. *Status Epilepticus*, 15-29. doi:10.1007/978-3-319-58200-9\_3.

Waterhouse, E. (2018). The epidemiology of status epilepticus. In: *Status Epilepticus: A Clinical Perspective*, 2nd Edition. In. F. Drislane & P. Kaplan (Eds). Humana Press.

■ **ABSTRACTS / POSTERS / PRESENTATIONS:**

Ono, K, Jean-Noel, N. & Browning, K (2017, December). Filling in Treatment Gap for Epilepsy Patients at Veterans Affairs Medical Centers in Virginia and West Virginia. Poster presented at the *American Epilepsy Society (AES) Annual Meeting*, Washington D.C.

Ono, K, & Gowda S. (May 2018). Neuromodulation: Managing Epilepsy with VNS and RNS. *46th Annual Hans Berger Clinical Neurophysiologic Symposium presentation*. Richmond, VA.

Waterhouse, E. (May 2018). ID the EEG. *46th Annual Hans Berger Clinical Neurophysiologic Symposium presentation*. Richmond, VA.

Jean-Noel, N. (2018). Diagnostic Work-up in Acute Ischemic Stroke. Stroke Certification Review/Seminar. *Central Virginia Chapter of American Association of Neuroscience Nursing*.

Towne, A. (May 2018). Epilepsy and Driving: Protecting the Patient and Yourself. *46th Annual Hans Berger Clinical Neurophysiologic Symposium presentation*. Richmond, VA.

Van Aken,R. (May 2018). Things That Make You Go Hmmm... Infection Control in Neurodiagnostics. *46th Annual Hans Berger Clinical Neurophysiologic Symposium presentation*. Richmond, VA.

## West Haven

■ **PUBLICATIONS / MANUSCRIPTS / CHAPTERS:**

Tolchin, B., Dworetzky, B. A., & Baslet, G. (2017). Long-term adherence with psychiatric treatment among patients with psychogenic nonepileptic seizures. *Epilepsia*, 59(1). doi:10.1111/epi.13969.

Baslet, G., Tolchin, B., & Dworetzky, B. A. (2017). Altered responsiveness in psychogenic nonepileptic seizures and its implication to underlying psychopathology. *Seizure*, 52, 162-168. doi:10.1016/j.seizure.2017.10.011.

Traner CB, Tolchin DW, Tolchin B. (In Press). Medical ethics education for neurology residents: where do we go from here? *Semin Neurol*. Accepted.

Tolchin B, Dworetzky BA, Martino S, Blumenfeld H, Hirsch HJ, & Baslet G. (submitted) Adherence with psychotherapy and treatment outcomes for patients with psychogenic nonepileptic seizures.

Tolchin B. (2017). Referee Report For: "*Blaming, shaming, humiliation*": Stigmatizing medical interactions among people with non-epileptic seizures [version 1; referees: 2 approved with reservations]. *Wellcome Open Res* 2:55 (doi: [10.21956/wellcomeopenres.13132.r26084](https://doi.org/10.21956/wellcomeopenres.13132.r26084)).

Altalib, H. H., Berg, A. T., Cong, X., Vickrey, B. G., Sperling, M. R., Shinnar, S., ... Devinsky, O. (2018). Presurgical depression and anxiety are not associated with worse epilepsy surgery outcome five years postoperatively. *Epilepsy & Behavior*, 83, 7-12. doi:10.1016/j.yebeh.2018.01.040.

Sagiraju, H. K., Wang, C., Amuan, M. E., Cott, A. C., Altalib, H. H., & Pugh, M. J. (2018). Antiepileptic drugs and suicide-related behavior. *Neurology: Clinical Practice*, 8(4), 331-339. doi:10.1212/cpj.0000000000000489.

#### ■ ABSTRACTS / POSTERS / PRESENTATIONS:

Tolchin, Ben. (2018). Seizures and seizure-like events. *Department of Veterans Affairs Specialty Care Access Network*. West Haven, CT.

Tolchin, Ben (2018). Expanding Meaningful Volunteer Opportunities for AAN members. *American Academy of Neurology Board of Directors Meeting*, Los Angeles, CA.

Tolchin, Ben (2018). Clinical research recommendations for residents and fellows. *American Academy of Neurology Board of Directors Meeting*, Los Angeles, CA.

Tolchin, Ben (2017). What AES Can Do for You: Professional. *American Epilepsy Society Annual Meeting*, Washington, DC: Development Session.

Tolchin, Ben (2017). A randomized trial of motivational interviewing to improve treatment adherence and outcomes among patients with psychogenic nonepileptic seizures. *American Epilepsy Society Annual Meeting*, Washington, DC.

Tolchin, Ben (2017). Treatment adherence and outcomes in psychogenic nonepileptic seizures (PNES). *American Epilepsy Society Annual Meeting*, Washington, DC.

Tolchin, Ben (2017). Presence of multiple comorbid functional symptoms impacts Psychogenic Nonepileptic Seizures (PNES) outcomes. *International Conference on Functional Neurological Disorders*, Edinburgh, Scotland.

Altalib, Hamada (2017). Update on Epilepsy & Mood Disorders. *University of Kentucky Department of Neurology*.

Altalib, Hamada (2017) AES Fellows Mentoring Session *American Epilepsy Society Annual Meeting*, Washington, DC: Development Session.

Altalib, Hamada (2017) Post-Traumatic Epilepsy. *Yale Annual Epilepsy CME Symposium*, New Haven, CT.

Khan A, Proops N, Flaherty J, Fenton B, Pugh MJ, Cheung K, Brandt C, Altalib H. Preliminary Report of Psychogenic Non-Epileptic Seizure Diagnosis Among Veterans From 2004–2014. *American Academy of Neurology*, L.A, CA.

Altalib Hamada. (2017). Neuropsychology of Epilepsy VA Connecticut Neuropsychology Fellowship. *West Haven*, CT.

Altalib Hamada (2017) Mood Disorders in Epilepsy. *Yale Epilepsy Fellowship*. New Haven, CT.

## Research/Grants | Northeast Region

### Baltimore

Principal Investigators Last, First, MI	Grant/Study Title	Project Start Date	Project End Date	Name of Funding Source
Krumholz, A (Site PI)	Evaluation of an Epilepsy Peer Support Program in the U.S. Veterans Affairs Epilepsy Centers of Excellence (ECOE): A Pilot Study	12/2018	12/2019	Industry – UCB Pharmaceutical
Hopp, Jennifer, L (Site PI)	Established Status Epilepticus Treatment Trial (ESETT)	3/1/2015	Future date	National Institute of Nervous Disease NINDS 1 UO1 NS08803401
Hopp, Jennifer, L (Site PI)	Neurological Emergencies Treatment Trials (NETT) Network Clinical Site Hubs	10/3/17	Future date	NIH NINDS 1 U10 NS058932-01
Tang, Cha-Min	NMDA receptor mediated feedforward memory	4/2014	2018	VA BLR&D

### Boston

Principal Investigators Last, First, MI	Grant/Study Title	Project Start Date	Project End Date	Name of Funding Source
Kobylarz, Erik McCarthy, David, Co-PI	A device to detect and quantify seizures using non-cerebral Sensor Modalities	10/1/2018	9/30/2020	DOD
Stern, Emily McCarthy, David, VA site PI	PTSD Severity and Imaging Biomarkers in Veterans with PNES: A Pilot	10/1/2017	9/30/2018	Epilepsy Foundation
Steven Shirk, PhD	The use of EEG in predicting relapse among AUD Veterans and its neuropsychological and clinical correlates	11/2017	11/2018	Bedford VA

## Richmond

Principal Investigators Last, First, MI	Grant/Study Title	Project Start Date	Project End Date	Name of Funding Source
Towne, Alan R, (Sub I)	Chronic Effects of Neurotrauma Consortium (CENC) Award. Study 1. Longitudinal case-controlled cohort study of OEF-OIF Veterans to evaluate for the late effects of combat-related mTBI.	10/1/14	10/1/19	DOD
Towne, Alan R, (Site PI)	Epidemiology of Epilepsy and Traumatic Brain Injury: Severity, Mechanism, and Outcomes			DOD
Towne, Alan R, (site PI)	Detecting PNES with single-channel sEMG	10/1/17	9/30/18	Brain Sentinel
Towne, Alan R, (site PI)	Evaluation of an Epilepsy Peer Support Program in the US Veterans Affairs' Epilepsy Centers of Excellence (ECoE): A Pilot Study	future		UCB
Ono, Ken	Clinical Validation of Automated Feature Detection in Dense Array EEG via a Computerized Neural Network	08/1/2017		VA

## West Haven

Principal Investigators Last, First, MI	Grant/Study Title	Project Start Date	Project End Date	Name of Funding Source
Tolchin, Benjamin	Electronic motivational interviewing for veterans with psychogenic nonepileptic seizures: development and feasibility testing	10/1/18	9/30/20	VISN1 Career Development Award
Tolchin, Benjamin	Automated electronic motivational interviewing to improve treatment adherence and outcomes among patients with psychogenic nonepileptic seizures	4/1/18	9/30/18	VA Pain Research, Informatics, Multimorbidities, Education (PRIME) Center of Innovation (VA HSR&D CIN 13-407)
Tolchin, Benjamin	Automated electronic motivational interviewing to improve treatment adherence and outcomes among patients with psychogenic nonepileptic seizures	5/1/18	4/30/19	C.G. Swebilus Trust

# Northwest Region

**Martin Salinsky, MD,**  
Acting Northwest ECoE Regional Director

**Vacant,**  
Northwest ECoE Regional Administrative Officer



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## Northwest Region

Regional Director: Martin Salinsky, MD  
Regional Administrative Officer: Vacant

### FY18 SELF-ASSESSMENT RESULTS:

- ▶ Final Score – The Region’s self-assessment score met or exceeded target score.
- ▶ Highlights: Expansion of telehealth
- ▶ Concerns/Issues: Administrative support

### FY18 ACCOMPLISHMENTS:

- ▶ Expansion of tele-health
  - Tele-mental health (CBT) for PNES and epilepsy (Madison)
  - Telehealth direct to patient’s home (Minneapolis, Seattle, Madison)
  - Tele-EEG (Portland)
  - Tele-health clinics (Portland, Seattle)
- ▶ Outpatient clinic expansion (Minneapolis, Portland)
- ▶ Implementation of standardized EMU evaluations (depression screening, PTSD evaluation, Quality of life, etc.
- ▶ Expansion of local CBT for treatment of PNES (Seattle, Portland, Madison)
- ▶ Funded epilepsy research projects (Seattle, Portland, Madison).
- ▶ Epilepsy related publications in peer-reviewed journals (Seattle, Portland, Madison)
- ▶ Education
  - VA ECoE table at national conference (Madison)
  - Development of new epilepsy related brochures, resource lists, medication sheets (Minn.)
  - Local and national epilepsy related lectures/ teaching programs
- ▶ Scan-Echo conferences including all four NE ECoE sites and participation by affiliate sites

### FY19 GOALS:

- ▶ Expansion of telemedicine services
  - Tele-health to the patient’s home
  - Tele-EEG
  - Telemedicine CVT clinics
- ▶ Expansion of local CBT for PNES (now available in Seattle, Portland, Madison)
  - Includes training a provider in Minn.
- ▶ Revamp Scan-Echo conferences with increased participation from affiliate sites.
- ▶ Transition to new ECoE local leadership (Madison, Minn.).
- ▶ Hire a regional administrative assistant (position remains vacant).
- ▶ Obtain funding for new research projects (Seattle, Portland, Madison).
- ▶ Participation in UCB peer-navigation study (Madison)

## OTHER FUTURE INITIATIVES:

- ▶ Bring availability of Neuropace into all regional ECoE centers (Madison has recently initiated).
- ▶ Integrate whole-health treatment with ECoE treatment.
- ▶ Improve adherence to quality improvement measures.
- ▶ Improve consistent monitoring for mental health issues, and pathways for assessment and treatment (OPC screening, inpatient EMU screening).

## Madison Fellowships:

Name	Fellowship	ACGME	VA FTE	Start Date	End Date
Ang Li, MD	Clinical Neurophysiology	Yes	0.25	7/1/2017	6/30/2018
Melanie Boly, MD	Clinical Neurophysiology	Yes	0.25	7/1/2016	6/30/2018
Josh Prankratz, MD	Epilepsy	Yes	0.25	7/1/2018	6/30/2019
Mohammad Kabir, MD	Clinical Neurophysiology	Yes	0.25	7/1/2018	6/30/2019

## Portland Fellowships:

Name	Fellowship	ACGME	VA FTE	Start Date	End Date
Kathryn Hagen MD	Epilepsy fellow (year 1; joint with OHSU)	Epilepsy	0.5	7/1/2018	7/1/2020
Jessica Stachyra MD	VA Polytrauma / Traumatic Brain Injury Rehab - Clinical Advanced Fellowship		1.0	7/1/2017	7/1/2019

## Publications/Presentations | Northwest Region

### Madison

#### ■ PUBLICATIONS / MANUSCRIPTS / CHAPTERS:

Kanner, A. M., Ashman, E., Gloss, D., Harden, C., Bourgeois, B., Bautista, J. F., Gidal, B. E., ... French, J. (2018). Practice guideline update summary: Efficacy and tolerability of the new antiepileptic drugs II: Treatment-resistant epilepsy. *Neurology*, 91(2), 82-90. doi:10.1212/wnl.0000000000005756.

Kanner, A. M., Ashman, E., Gloss, D., Harden, C., Bourgeois, B., Bautista, J. F., Gidal, B. E., ... French, J. (2018). Practice guideline update summary: Efficacy and tolerability of the new antiepileptic drugs I: Treatment of new-onset epilepsy. *Epilepsy Currents*, 18(4), 260-268. doi:10.5698/1535-7597.18.4.26.

Gidal, B. E., Jacobson, M. P., Ben-Menachem, E., Carreño, M., Blum, D., Soares-Da-Silva, P., ... Sunkaraneni, S. (2018). Exposure-safety and efficacy response relationships and population pharmacokinetics of eslicarbazepine acetate. *Acta Neurologica Scandinavica*, 138(3), 203-211. doi:10.1111/ane.12950.

Leary, E., Sheth, R. D., & Gidal, B. E. (2018). Time course of reversal of valproate-mediated inhibition of lamotrigine. *Seizure*, 57, 76-79. doi:10.1016/j.seizure.2018.03.003.

Mintzer, S., Wechsler, R. T., Rogin, J. B., Gidal, B. E., Schwab, M., Ben-Menachem, E., Gidal, B. E., ... Grinnell, T. (2018). Effects of adjunctive eslicarbazepine acetate on serum lipids in patients with partial-onset seizures: Impact of concomitant statins and enzyme-inducing antiepileptic drugs. *Epilepsy Research*, 141, 83-89. doi:10.1016/j.eplepsyres.2018.02.001.

Isojarvi, J., Gidal, B. E., Chung, S., & Wechsler, R. T. (2018). Optimizing clobazam treatment in patients with Lennox–Gastaut syndrome. *Epilepsy & Behavior*, 78, 149-154. doi:10.1016/j.yebeh.2017.10.003.

Hawkins, K. L., & Gidal, B. E. (2017). When adverse effects are seen as desirable: Abuse potential of the newer generation antiepileptic drugs. *Epilepsy & Behavior*, 77, 62-72. doi:10.1016/j.yebeh.2017.10.007.

Berg M, Welty T.E., Gidal B. E., et al (2017). Bioequivalence Between Generic and Branded Lamotrigine in People with Epilepsy The EQUIGEN Randomized Clinical Trial. *JAMA Neurol*, 74(8):919–926. doi:10.1001/jamaneurol.2017.0497.

Gidal, B. E., Mintzer, S., Schwab, M., Schutz, R., Kharidia, J., Blum, D., Sunkaraneni, S. (2017). Evidence for a pharmacokinetic interaction between eslicarbazepine and rosuvastatin: Potential effects on xenobiotic transporters. *Epilepsy Research*, 135, 64-70. doi:10.1016/j.eplepsyres.2017.05.005.

Gidal, B. E., Maganti, R., Laurenza, A., Yang, H., Verbel, D. A., Schuck, E., & Ferry, J. (2017). Effect of enzyme inhibition on perampanel pharmacokinetics: Why study design matters. *Epilepsy Research*, 134, 41-48. doi:10.1016/j.eplepsyres.2017.04.018.

Gidal, B. E., Clark, A. M., Anders, B., & Gilliam, F. (2017). The application of half-life in clinical decision making: Comparison of the pharmacokinetics of extended-release topiramate (USL255) and immediate-release topiramate. *Epilepsy Research*, 129, 26-32. doi:10.1016/j.eplepsyres.2016.10.020.

Rowland, J. A., Stapleton-Kotloski, J. R., Alberto, G. E., Davenport, A. T., Kotloski, R. J., Friedman, D. P., Gidal, B. E., Daunais, J. B. (2017). Changes in nonhuman primate brain function following chronic alcohol consumption in previously naïve animals. *Drug and Alcohol Dependence*, 177, 244-248. doi:10.1016/j.drugalcdep.2017.03.036.

Rowland, J. A., Stapleton-Kotloski, J. R., Alberto, G. E., Rawley, J. A., Kotloski, R. J., Taber, K. H., Gidal, B. E., & Godwin, D. W. (2017). Contrasting Effects of Posttraumatic Stress Disorder and Mild Traumatic Brain Injury on the Whole-Brain Resting-State Network: A Magnetoencephalography Study. *Brain Connectivity*, 7(1), 45-57. doi:10.1089/brain.2015.0406.

Geller EB, Skarpaas TL, Gross RE, Goodman RR, Barkley GL, Bazil CW, Berg MJ, Bergey GK, Cash SS, Cole AJ, Duckrow RB, ... Rutecki PA, ... Sun FT, & Morrell MJ. (Jun 2017). Brain-responsive neurostimulation in patients with medically intractable mesial temporal lobe epilepsy. *Epilepsia*. 58(6):994-1004. doi: 10.1111/epi.13740. Epub 2017 Apr 11. PMID: 28398014.

Jobst BC, Kapur R, Barkley GL, ... Rutecki PA, ... Skarpaas TL, & Morrell MJ. (Apr 2017). Brain-responsive neurostimulation in patients with medically intractable seizures arising from eloquent and other neocortical areas. *Epilepsia*. 2017 Jun;58(6):1005-1014. doi: 10.1111/epi.13739. Epub 7. PMID: 28387951.

Salinsky M, Rutecki P, Parko K, Goy E, Storzbach D, O'Neil M, Binder L, & Joos S. Psychiatric comorbidity and TBI attribution of patients with psychogenic non-epileptic or epileptic seizures: a multicenter study of U.S. Veterans. *Epilepsia* (in press).

#### ■ ABSTRACTS / POSTERS / PRESENTATIONS:

Welty T, Gidal BE, Berg M, Privitera P, Dworetzky B, & Szaflarski JP. (2017). Medication Adherence in the Equigen Study of Generic Lamotrigine Substitution: Implications for Clinical Trials. *AES annual meeting*. Abst. 3.262. Washington, DC.

Chung SS, Gidal BE, Lemming OM, Karnik-Henry M, Hackler E, Tolbert D, Tworek DM, & Sayeed S. (2017). Combination AED Treatment with Clobazam in Patients with Lennox–Gastaut Syndrome: Post Hoc Analyses of the CONTAIN Study. *AES annual meeting*. Abst. 2.429. Washington, DC.

Gidal BE, Rehman R, & Tran T. (2017). Patterns of Psychotropic Drug use and Potential for Pharmacokinetic Interactions in Veterans with Epilepsy. *AES annual meeting*. Abst. 1.316. Washington DC.

Hixson J, Gidal BE, Pikalov A, Grinnell T, Cantu D, Jung J, & Blum DE. (2017). Design of a multicenter study of eslicarbazepine acetate as a first add-on to initial levetiracetam or lamotrigine monotherapy and as later adjunctive therapy for uncontrolled partial-onset seizures. *AES annual meeting*. Abst. 1.288. Washington, DC.

Kotloski RJ, Dunn S, & Chen A. (2017). Genetic background and anesthesia duration influence hippocampal BDNF protein levels after acute TBI in rat. *AES annual meeting* Abst. 1.044. Washington, DC.

Salinsky M, Parko K, Rutecki PA, Storzbach D, Goy G, O'Neill M, & Joos S. (2017). Traumatic Brain Injury in Veterans with Epileptic and Psychogenic Non-Epileptic Seizures. *AES annual meeting* Abst. 2.256. Washington, DC.

Pan Y, & Rutecki PA. (2017). Low glucose and 2DG reduced enhanced excitatory more than inhibitory epileptiform synaptic network activity in the hippocampus. *AES annual meeting* Abst. 1.028. Washington, DC.

Rutecki PA, Kotloski, RJ, Hanson M, & Sutula T. (2017). 2DG following brain injury reduces late posttraumatic epilepsy in a unique model of TBI with frequent generalized posttraumatic seizures in "fast" kindling-susceptible PPKS rats. *Society for Neuroscience Annual Meeting* Abst 140.07. Washington, DC.

Rutecki PA (Sept 2018). Self-Management of Epilepsy. Madison, WI. *Epilepsy Foundation*.

## Minneapolis

■ PUBLICATIONS / MANUSCRIPTS / CHAPTERS:

■ ABSTRACTS / POSTERS / PRESENTATIONS:

## Portland

■ PUBLICATIONS / MANUSCRIPTS / CHAPTERS:

Salinsky, M., Wong, V. S., Motika, P., Meuse, J., & Nguyen, J. (2018). Emergency department neuroimaging for epileptic seizures. *Epilepsia*, 59(9), 1676-1683. doi:10.1111/epi.14518.

Salinsky, M., Rutecki, P., Parko, K., Goy, E., Storzbach, D., Oneil, M., ... Joos, S. (2018). Psychiatric comorbidity and traumatic brain injury attribution in patients with psychogenic nonepileptic or epileptic seizures: A multicenter study of US veterans. *Epilepsia*, 59(10), 1945-1953. doi:10.1111/epi.14542.

Kellogg, M. A., Westbrook, G. L., & Spencer, D. C. (2018). Epilepsy-Specific Citation Classics Revisited. *Epilepsy Currents*, 18(2), 72-83. doi:10.5698/1535-7597.18.2.72.

Wong, V. S., Strowd, R. E., Aragón-García, R., Moon, Y. P., Ford, B., Haut, S. R., ... Spencer, D. C., Elkind, M. S. (2017). Mentored peer review of standardized manuscripts as a teaching tool for residents: A pilot randomized controlled multi-center study. *Research Integrity and Peer Review*, 2(1). doi:10.1186/s41073-017-0032-0.

Jobst, B. C., Kapur, R., Barkley, G. L., Bazil, C. W., Berg, M. J., Bergey, G. K., Spencer, D. C., Morrell, M. J. (2017). Brain-responsive neurostimulation in patients with medically intractable seizures arising from eloquent and other neocortical areas. *Epilepsia*, 58(6), 1005-1014. doi:10.1111/epi.13739.

Geller, E. B., Skarpaas, T. L., Gross, R. E., Goodman, R. R., Barkley, G. L., Bazil, C. W., Spencer, D. C., Morrell, M. J. (2017). Brain-responsive neurostimulation in patients with medically intractable mesial temporal lobe epilepsy. *Epilepsia*, 58(6), 994-1004. doi:10.1111/epi.13740.

Szaflarski, J. P., Gloss, D., Binder, J. R., Gaillard, W. D., Golby, A. J., Holland, S. K., Spencer, D. C., Theodore, W. H. (2017). Practice guideline summary: Use of fMRI in the presurgical evaluation of patients with epilepsy. *Neurology*, 88(4), 395-402. doi:10.1212/wnl.0000000000003532.

Spencer DC (2018) Chapter 13 Presurgical Localization of Epilepsy. in Raslan A and Burchiel KJ (eds): Functional Neurosurgery and Neuromodulation, Elsevier, St Louis, MO, 1st Edition.

Burchiel KJ and Spencer DC (2018) Chapter 17 Transcortical Selective Microsurgical Amygdalohippocampectomy for Medically Intractable Seizures Originating in the Mesial Temporal Lobe. in in Raslan A and Burchiel KJ (eds): Functional Neurosurgery and Neuromodulation, 1st Edition.

Ernst LD. (2018). Responsive Neurostimulation. In: Burchiel K, Raslan A, editors. Functional Neurosurgery and Neuromodulation. Elsevier.

■ **ABSTRACTS / POSTERS / PRESENTATIONS:**

J Nguyen, V Wong, P Motika, JMeuse, M Salinsky. (2017). Emergency Department neuroimaging for Epileptic Seizures. Presented at the annual meeting of the *American Epilepsy Society*, 12/17. #2.387, Washington, DC.

M Salinsky, K Parko; P Rutecki, D Storzbach, E Goy, M O'Neill, S Joos. (2017). Traumatic brain injury in veterans with epileptic and psychogenic non-epileptic seizures. Presented at the annual meeting of the *American Epilepsy Society*, 12/17. #2.256. Washington, DC.

**Seattle**

■ **PUBLICATIONS / MANUSCRIPTS / CHAPTERS:**

Doud, A., Julius, A., & Ransom, C. B. (2018). Visual Phenomena in Occipital Lobe Epilepsy. *JAMA Neurology*, 75(9), 1146. doi:10.1001/jamaneurol.2018.2144.

Ozuna, J, Kelly, P, Towne, & Hixson, J. (2018). Self-management in epilepsy care: untapped opportunities. *Fed Pract*. 35(3):S10-S16.

Baker, A., Kalmbach, B., Morishima, M., Kim, J., Juavinett, A., Li, N., & Dembrow, N. (2018). Specialized Subpopulations of Deep-Layer Pyramidal Neurons in the Neocortex: Bridging Cellular Properties to Functional Consequences. *The Journal of Neuroscience*, 38(24), 5441-5455. doi:10.1523/jneurosci.0150-18.2018.

■ **ABSTRACTS / POSTERS / PRESENTATIONS:**

Parga, A. & Ransom, CB. (2018). Modulation of extrasynaptic GABAA receptors in dentate gyrus granule cells by GABAB receptors and severe TBI. *Soc Neurosci Abstr* 42.

Johnson EK, Fraser RT, & Ransom CB. (November 2017). PACES-V: A consumer-driven epilepsy self-management program. *American Epilepsy Society Annual Meeting*, Washington, DC.

**Research/Grants | Northwest Region**

**Madison**

<b>Principal Investigators Last, First, MI</b>	<b>Grant/Study Title</b>	<b>Project Start Date</b>	<b>Project End Date</b>	<b>Name of Funding Source</b>
Rutecki, P	Mechanisms of 2DG Anti-Epileptic Effects	10/01/2014	9/30/2018	VA BLR&D
Sutula, T, Co-investigator Rutecki, P	IND-enabling Preclinical Studies of 2DG for Prevention of Post-Traumatic Epilepsy in Plasticity Susceptible Rats	09/01/2014	8/31/2017	CURE
Kotloski, R	RCDA: TBI and posttraumatic epilepsy in plasticity susceptible and resistant rats	04/01/2016	03/30/2021	VA BLR&D
Rutecki, P, Kotloski, R	Peer Support for U.S. Veterans with Epilepsy	7/1/2018	10/1/2019	UCB

## Portland

Principal Investigators Last, First, MI	Grant/Study Title	Project Start Date	Project End Date	Name of Funding Source
Salinsky, M	Psychogenic Seizures in US Veterans (COVE)	12/13	12/17	VA Merit Review
Salinsky, M	Treatment of Psychogenic non-epileptic Seizures in Veterans	6/2017	-	VA cooperative studies. LOI accepted, in planning for full submission FY 2018
Boudreau	Assuring Proficiency in Biomedical Informatics and Data Science for Biomedical Researchers;	9/18	6/19	National Library of Medicine (NIH/DHHS), Role: core faculty member, PI: William Hersh
Boudreau	Sleep Data Analytics Service Market Research	9/17	7/19	US Department of Veterans Affairs; Role: co-investigator, PI: Annette Totten
Boudreau	Sleep Research Network (SRN) PCORI Engagement Award,	7/16	6/18	Co-investigator, PI Sai Parthasarathy (U. of Arizona),

## Seattle

Principal Investigators Last, First, MI	Grant/Study Title	Project Start Date	Project End Date	Name of Funding Source
Spain, William	Dynamics of Kv channel function in identified populations of pyramidal neurons in neocortex	2/01/2018	1/31/2023	NIH (NINDS) RO1
Ransom, Christopher	Regulation of extrasynaptic GABAA receptors in health and disease	10/1/2015	09/30/2019	Veterans Administration Merit Review
Robert Fraser, PhD (Ransom, co-investigator)	MEW Collaborating Center: PACES replication (Veteran's RCT)	9/30/2015	9/29/2019	DOD



# Southeast Region

**Aatif M. Husain, MD**  
Regional Director

**Maria Lopez, MD,**  
Newly Elected Regional Director

**Pamela Kelly, DHA, MBA/HCM**  
Regional Administrative Director



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### Southeast Region

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Regional Administrative Officer: Pamela Kelly, DHA, MBA/HCM

#### FY18 SELF-ASSESSMENT RESULTS:

- ▶ Final Score – Pass
- ▶ Highlights: Growth in CVT – Home (approximately doubled)
- ▶ Concerns/Issues: Dips in Tele-Health in general (Requires significant administrative help)

#### FY18 ACCOMPLISHMENTS:

- ▶ Growing telemedicine
- ▶ Continue funding clinical neurophysiology fellowship; Continue collaboration with other VA to allow direct admissions for EMU and reading EEGs.
- ▶ Growing in research in multiple areas such as assistance in determination of safe driving for patients with epilepsy.
- ▶ Implementation of more CBT clinics for treatment on non-epileptic seizures
- ▶ Upgrading EEG equipment to the latest technology
- ▶ Creation of educational video for women with epilepsy
- ▶ Improvement continuous coverage EEG afterhours
- ▶ Increase ICU continuous EEG remote
- ▶ Continue remote participation in local epilepsy events.

**FY19 GOALS:**

- ▶ Increase Home health
- ▶ Increase telehealth access
- ▶ Increase store and forward EEG
- ▶ Increase research Brain Sentinel (Miami)
- ▶ Quality assurance program (QI/QA) Improvement of care of psychiatric comorbidities in Veterans. (Miami)
- ▶ Creation of a template in CPRS for care of woman with epilepsy.

**OTHER FUTURE INITIATIVES:**

- ▶ Establish Mental health champion
- ▶ Increase tele-EEG
- ▶ Increase of ICU EEG services
- ▶ Increase educational activities outreach to Veterans and providers in the community (Durham)

**Durham Fellowships:**

Name	Fellowship	ACGME	VA FTE	Start Date	End Date
Colleen Stack, MD	Clinical Neurophysiology	Yes	.33	7/1/2018	6/30/2019
Jason Bethea, MD	Clinical Neurophysiology	Yes	.33	7/1/2018	6/30/2019
Christian Hernandez, MD	Clinical Neurophysiology	Yes	.33	7/1/2018	6/30/2019

**Gainesville Fellowships:**

Name	Fellowship	ACGME	VA FTE	Start Date	End Date
Nakia Wilson, MD	Clinical Neurophysiology	Yes	0.5	July 1, 2017	June 30, 2018

**Miami Fellowships:**

Name	Fellowship	ACGME	VA FTE	Start Date	End Date
Alexandra Carte, MD	Epilepsy	Yes	0	7/1/2017	6/30/2018
Mellissa Fellman, MD	Clinical Neurophysiology	Yes	1	7/1/2017	6/30/2018
Ima Ebong, MD	Clinical Neurophysiology	Yes	0	7/1/2017	6/30/2018

**Tampa Fellowships:**

Name	Fellowship	ACGME	VA FTE	Start Date	End Date
Ishtar Amin, MD	Clinical Neurophysiology	Yes	0.6	7/1/2018	6/30/2019
Kristyn Spera, MD	Clinical Neurophysiology	Yes	0.8	7/1/2018	6/30/2019
Amanda Pennington, MD	Clinical Neurophysiology	Yes	0.6	7/1/2018	6/30/2019

## Publications/Presentations | Southeast Region

### Durham

#### ■ PUBLICATIONS / MANUSCRIPTS / CHAPTERS:

Husain, A. M, Tran, T. (2018) Editors: Department of Veterans Affairs Epilepsy Manual Second Edition Published by Epilepsy Centers of Excellence, *Department of Veterans Affairs*, Washington, DC.

Hani AJ, Husain AM. (2018). Early treatment of convulsive status epilepticus. In Drislane F, Kaplan P, eds. Status Epilepticus: A Clinical Perspective, 2nd ed., *Demos Medical Publishing*, New York, pp. 193-200.

Hani AJ, Husain AM. Brainstem auditory evoked potentials and other auditory evoked potentials. (2018). In Schomer D, Lopes da Silva F, eds. Niedermeyer's Electroencephalography, Basic Principles, Clinical Applications, and Related Fields, 7th ed., *Oxford University Press*, New York, pp. 1056-1070.

Husain AM. Normal EEG. In Wasade V, Spanaki-Varelas M, eds. Epilepsy – diagnosis and management – state of the art. *Rutger's University Press*, New Jersey, in press.

Husain AM, Schwartz S, Kale EB. Artifacts in neurophysiologic intraoperative monitoring. In Tatum WO IV, Artifacts in clinical neurophysiology, *Demos Medical Publishing*, in press.

Husain AM, Sinha SR (editors). Continuous EEG Monitoring; Principles and Practice. *Springer*, Heidelberg, Germany, 2017.

Husain AM. (2017). An Illustrated Manual of Clinical Evoked Potentials. *Demos Medical Publishing*, New York.

Pugh. M. J., Rehman, R., Kelly, P. R. (2018). Epidemiology. In: Husain and Tran eds. Department of Veterans Affairs Epilepsy Manual. Second Editions Published by Epilepsy Centers of Excellence, *Department of Veterans Affairs* Washington, DC.

Husain, A. M, Tran, T. (2018). Clinical Evaluation In: Husain and Tran eds. Department of Veterans Affairs Epilepsy Manual. Second Editions Published by Epilepsy Centers of Excellence, *Department of Veterans Affairs* Washington, DC.

Tran, T. (2018). Evaluation for Epilepsy Surgery In: Husain and Tran eds. Department of Veterans Affairs Epilepsy Manual. Second Editions Published by Epilepsy Centers of Excellence, *Department of Veterans Affairs*, Washington, DC.

Sandlin, T. S., & Kelly, P. R. (2018). VHA Benefits. In: Husain and Tran eds. Department of Veterans Affairs Epilepsy Manual. Second Editions Published by Epilepsy Centers of Excellence, *Department of Veterans Affairs*, Washington, DC.

Hixon J, Kelly, P. R., & Towne AR. (April 2018). Self-Management in Epilepsy. *Federal Practitioner*. Husain, A. M, Lee JW, Kolls BJ, Hirsch LJ, Halford JJ, Gupta PK, Minazad Y, Jones JM, LaRoche SM, Herman ST, Swisher CB, Sinha SR, Palade A, Dombrowski KE, Gallentine WB, Hahn CD, Gerard EE, Bhapkar M, Lokhnygina Y, Westover MB. (2018). Critical Care EEG Monitoring Research Consortium. Randomized trial of lacosamide versus fosphenytoin for nonconvulsive seizures. *Ann Neurol*. 83(6):1174-1185. doi: 10.1002/ana.25249.

Husain, A. M. (2018). It HELPS 2NO When to Stop Continuous EEG Monitoring in Critically Ill Patients. *Epilepsy Currents*, 18(4), 233-235. doi:10.5698/1535-7597.18.4.233.

Kang, J. H., Husain, A. M., & Morgenlander, J. C. (2018). Loss of Vestibular Ocular Reflex in Nonconvulsive Status Epilepticus. *Neurocritical Care*. doi:10.1007/s12028-018-0567-z.

Husain, A. M. (2018). To warn or not to warn: A reappraisal of brainstem auditory evoked potential warning criteria during surgery. *Clinical Neurophysiology*, 129(5), 1053-1055. doi:10.1016/j.clinph.2018.02.001.

Sully, K. E., & Husain, A. M. (2018). Generalized Periodic Discharges. *Journal of Clinical Neurophysiology*, 35(3), 199-207. doi:10.1097/wnp.0000000000000460.

- Cobb, M. I., Crowson, M., Mintz-Cole, R., Husain, A. M., Berger, M., Jang, D., & Codd, P. (2018). Transnasal Transsphenoidal Elevation of Optic Chiasm in Secondary Empty Sella Syndrome Following Prolactinoma Treatment. *World Neurosurgery*, 112, 250-253. doi:10.1016/j.wneu.2018.01.202.
- Johnson, T., Kale, E. B., & Husain, A. M. (2018). Magnesium Sulfate-Induced Motor Evoked Potential Changes. *The Neurodiagnostic Journal*, 58(2), 83-90. doi:10.1080/21646821.2018.1469336.
- Schwartz, S. L., Kale, E. B., & Husain, A. M. (2018). Lower Extremity Somatosensory Evoked Potential P37 Waveform Optimization. *The Neurodiagnostic Journal*, 58(3), 174-181. doi:10.1080/21646821.2018.1499304.
- Husain AM. Continuous EEG monitoring – the neurologist’s crystal ball. *Epilepsy Currents*, in press.
- Husain AM. Raw versus processed EEG: which one is better? *Epilepsy Currents*, in press.
- Keller, C.M., McNeill, D., Piper, J.T., Sinha, S.R. (2018). Use of Subtemporal Electrode Chains and Their Contribution to Presurgical Evaluation. *Neurodiagn J*;58(3):164-173. doi: 10.1080/21646821.2018.1491173.
- Lopez, M., Rehman, R., Kanner, A. (2018). Is treatment resistant focal epilepsy less frequent in Veterans. *Online Journal of Neurology and Brain Disorders* 1(1) DOI: 10.32474/OJNBD.2018.01.000105.

■ **ABSTRACTS / POSTERS / PRESENTATIONS:**

- Shawniqua Williams, Rizwana Rehman, Gabriel Bucurescu. (2018). Antiepileptic Drugs and Suicidality in Veterans with Epilepsy. P6.264. *American Academy of Neurology Annual Meeting*, Los Angeles, CA.
- Mark Armanious, Maria Lopez, Rizwana Rehman, Andres Kanner. (2018). Persistence symptoms of depression and anxiety in Veterans with epilepsy. Can it be prevented. P6.284. *American Academy of Neurology Annual Meeting*, Los Angeles, CA.
- Barry Gidal, Rizwana Rehman, Tung Tran, Ariela Karasov. (2017) Patterns Of Psychotropic Drug Use And Potential For Pharmacokinetic Interactions In Veterans With Epilepsy. P 1.316. *American Epilepsy Society Annual Meeting*, Washington, DC.
- Rizwana Rehman, Pamela Kelly, Aatif Husain. (2017). Tele-Epilepsy Expansion Continues In The VHA Epilepsy Centers Of Excellence In Alignment With Myva Priorities. P1.392 *American Epilepsy Society Annual Meeting*, Washington, DC.
- Richards J, Barker L, Husain AM, Luedtke MW, Sinha SR, Zafar MS. (2018). EEG source localization of interictal discharges and outcome for LITT for temporal lobe epilepsy. Presented at the *International Congress of Clinical Neurophysiology*, Washington, DC.
- Schwartz SL, Kale EB, Husain AM. (2018). Identifying the best stimulation configuration to use for linked -quadripolar motor evoked potentials. Presented at the *International Congress of Clinical Neurophysiology*, Washington, DC.
- Husain AM, Lee JW, Kolls BJ, Hirsch LJ, Halford JJ, Gupta PK, Minazad Y, Jones JM, LaRoche SM, Herman ST, Swisher CB, Sinha SR, Palade A, Dombrowski KE, Gallentine WB, Hahn CD, Gerard EE, Bhapkar M, Lokhnygina Y, Westover MB for the Critical Care EEG Monitoring and Research Consortium. (2018). EEG features of nonconvulsive seizures in critically ill patients – the TRENDS experience. Presented at the *International Congress of Clinical Neurophysiology*, Washington, DC.

**Gainesville**

■ **PUBLICATIONS / MANUSCRIPTS / CHAPTERS:**

- Mundt, J. M., Eisenschenk, S., & Robinson, M. E. (2017). An Examination of Pain’s Relationship to Sleep Fragmentation and Disordered Breathing Across Common Sleep Disorders. *Pain Medicine*, 19(8), 1516-1524. doi:10.1093/pm/pnx211.
- Lodha, N., Harrell, J., Eisenschenk, S., & Christou, E. A. (2017). Motor Impairments in Transient Ischemic Attack Increase the Odds of a Subsequent Stroke: A Meta-Analysis. *Frontiers in Neurology*, 8. doi:10.3389/fneur.2017.00243.

## ■ ABSTRACTS / POSTERS / PRESENTATIONS:

Riley, D. (July 2018). Guidelines for Women Taking Anticonvulsants – *Patient Health Fair*, Gainesville, FL.

Eisenchenk, S. (February 2018). Seizures. Grand Rounds; *Jacksonville Primary Care*: Jacksonville, FL.

Kaye L, Hella M, Almeida L, Newcomer Z, & Eisenschenk S. (Apr 2018). EEG Predictors of Post-Stroke Seizure. *American Academy of Neurology 70th Annual Meeting*, Los Angeles, CA.

## Miami

### ■ PUBLICATIONS / MANUSCRIPTS / CHAPTERS:

Lopez, M., Rehman, R., Kanner, A. (2018) Is treatment resistant focal epilepsy less frequent in Veterans. *Online Journal of Neurology and Brain Disorders* 1(1) DOI: 10.32474/OJNBD.2018.01.000105.

### ■ ABSTRACTS / POSTERS / PRESENTATIONS:

Armanious M., Lopez MR et al. (2018). Persistent symptoms of depression and anxiety disorders in Veterans with epilepsy. Can it be prevented? *AAN*. Los Angeles, CA.

Presentation: 2018: Latin Neuro. *Congreso Latinoamericano de Neuroanestesia, Cuidado Neurocritico y Disciplinas de Neurociencias*. Medellin, Colombia.

## Tampa

### ■ PUBLICATIONS / MANUSCRIPTS / CHAPTERS:

Yehl, J., Klippel, C., Frontera, A.,T., Kozel, A. (2018). Differentiating symptoms of bipolar disorder from those of temporal lobe epilepsy: A Case Report. *J Psychiatric Prac.* 24(3):199-205. PMID: 30015790.

Vivas, A. C., Reitano, C. J., Waseem, H., Benbadis, S. R., & Vale, F. L. (2017). An analysis of quality of life (QOL) in patients with epilepsy and comorbid psychogenic nonepileptic seizures (PNES) after vagus nerve stimulation (VNS). *Epilepsy & Behavior*, 73, 208-213. doi:10.1016/j.yebeh.2017.05.035.

Thiele, E.,A., Mazurkiewicz-Beldzinska, M., Benbadis, S.,R., Marsh, E.,D., ... Sommerville, K. (2018) Cannabidiol in patients with seizures associated with Lennox-Gastaut syndrome (GWPCARE4): a randomized, double-blind, placebo-controlled phase 3 trial. *Lancet*, 391(10125), 1085-1096.

Benbadis, S., Klein, P., Schiemann, J., Diaz, A., Elmoufti, S., & Whitesides, J. (2018). Efficacy, safety, and tolerability of brivaracetam with concomitant lamotrigine or concomitant topiramate in pooled Phase III randomized, double-blind trials: A post-hoc analysis. *Epilepsy & Behavior*, 80, 129-134. doi:10.1016/j.yebeh.2017.12.024.

Amin U, Benbadis S. Neurostimulation for the Treatment of Epilepsy. *Medscape Drugs & Diseases*. Updated Sept 8, 2016. Available at: <http://emedicine.medscape.com/article/1186123-overview>.

Benbadis, S. R., & Thomas, P. (2017). When EEG is bad for you. *Clinical Neurophysiology*, 128(4), 656-657. doi:10.1016/j.clinph.2016.12.033.

Rathod, J., & Benbadis, S. R. (2017). Diagnostic Challenges for the Neurologist. In: Psychogenic Nonepileptic Seizures: Toward the Integration of Care. *Oxford Medicine Online*. doi:10.1093/med/9780190265045.003.0007.

Benbadis, S. R., & Lafrance, W. C. (n.d.). Clinical Features and the Role of Video-EEG Monitoring. *Gates and Rowans Nonepileptic Seizures*, 44-57. doi:10.1017/9781316275450.005.

■ **ABSTRACTS / POSTERS / PRESENTATIONS:**

Amin U, Khan T, Benbadis S, & Frontera AT. (May 2018). Outcome of Prolonged Video-EEG Monitoring in a New VA Monitoring Unit. Presented at the *American Clinical Neurophysiology Society Annual Meeting*, Washington, DC.

Rivera-Cruz A, Jayakody H, MacIver S, Frontera A, Vale F, & Benbadis S. (Apr 2018). Adoption of Brain Responsive Neurostimulation (RNS) at a Typical Level 4 Epilepsy Center. Presented at the *American Academy of Neurology Annual Meeting*. Los Angeles, CA.

**Research/Grants | Southeast Region**

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<b>Principal Investigators Last, First, MI</b>	<b>Grant/Study Title</b>	<b>Project Start Date</b>	<b>Project End Date</b>	<b>Name of Funding Source</b>
Husain, AM (Site PI)	Detecting psychogenic nonepileptic seizures with single-channel SEMG	12/04/17	ongoing	Brain Sentinel

**Gainesville**

<b>Principal Investigators Last, First, MI</b>	<b>Grant/Study Title</b>	<b>Project Start Date</b>	<b>Project End Date</b>	<b>Name of Funding Source</b>
Eisenschenk, Stephan (Site PI)	Utilization of EEG Following Stroke for Prediction of Future Risk for Seizures	June 2017	Indefinite	Densch Epilepsy Research Fund



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Sunita Dergalust, MD	Clinical Pharmacist in Neurology and Neurosurgery	<a href="mailto:Sunita.dergalust@va.gov">Sunita.dergalust@va.gov</a>	(310) 268-3595
Jean-Phillipe Langevin, MD	Neurosurgeon	<a href="mailto:Jean-Philippe.Langevin@va.gov">Jean-Philippe.Langevin@va.gov</a>	(310) 478-3711 Ext. 41747

### Southwest Region

Regional Director: Nina I. Garga, MD

Regional Administrative Officer: Vacant

#### FY18 SELF-ASSESSMENT RESULTS:

- ▶ Final Score – Pass
- ▶ Highlights: Outstanding clinical productivity with highest volume of epilepsy monitoring unit admissions and surgery within the region. Heavy investment in educating medical students, neurology residents, epilepsy and EEG fellows, pharmacists, nurses, and psychologists. Active participation in DoD, NIH, and VA funded research projects with substantial publications in the field.
- ▶ Concerns/Issues: Awaiting guidance on advisory board regulations before reconvening an external review committee.

#### FY18 ACCOMPLISHMENTS:

- ▶ At least half the sites have initiated video-to-home telehealth visits.
- ▶ Active Neupace RNS implantations and battery replacements within the region, and recent approval to begin DBS implantations.
- ▶ Epilepsy surgeries including phase 2 implantations have continued within the region.

- ▶ Highest clinical productivity in epilepsy monitoring unit admissions, including high density EEG recordings at some sites.
- ▶ Provided CBT for PNES at several sites.
- ▶ Heavy investment in education programs for fellows, residents, students, pharmacists, and nurses.
- ▶ Conducted research related to CBT for PNES, PNES biomarkers, peer support, epilepsy genetics, status epilepticus, and more.
- ▶ Outreached to consortium sites in New Orleans (via Houston), Long Beach (via WLA), and Las Vegas (via SF) to enhance access to high quality clinical care.
- ▶ Developed a post-rotation in-service exam for neurology residents rotating through the Epilepsy/EEG service.

### **FY19 GOALS:**

- ▶ Top priority to support all other goals:
  - Obtain approval and hire a Southwest Regional Administrative Officer.
- ▶ Clinical/Outreach: All sites will grow their clinical programs to meet local and regional needs. This will include:
  - Increasing surgical volume for RNS, DBS, VNS and resections at the sites offering these modalities, and possibly add laser surgery offering within the region.
  - Increasing video telehealth access, particularly using interfacility clinical video telehealth visits and the video-to-home platform.
  - Expanding CBT for PNES volume across the region.
  - Expanding inpatient video EEG telemetry monitoring access.
- ▶ Research: Funded sites will continue to participate in DoD, NIH and VA funded research studies. Additional grants will be submitted this year including collaborations between our sites.
- ▶ Education: All sites will continue to participate in education programs and projects.
- ▶ Funding and training ACGME fellows (epilepsy and/or clinical neurophysiology) at sites with epilepsy monitoring units (EMU).
- ▶ Nurse training for EMU safety at all sites with an EMU, with West LA nurse leading the ECoE nursing workgroup.
- ▶ Pharmacist training through formal fellowships (West LA) or students and residents (SF).

### **OUTREACH**

- ▶ Goal to have one SW regional consortium video teleconference session.
- ▶ Strengthen Epilepsy foundation collaborations.
- ▶ Utilize the traveling veteran coordinator program to improve communication and continuity of care for rural or distant veterans.

### **OTHER FUTURE INITIATIVES:**

- ▶ Obtain approval and hire a Southwest Regional Administrative Officer.
- ▶ Set up regional advisory board once guidance received from central office.
- ▶ Open EMU at San Antonio ECoE.
- ▶ Begin DBS implantations and laser surgery at West LA ECoE.
- ▶ Obtain contract for Neuropace RNS purchase and implantation at Houston ECoE.
- ▶ Resume lobectomies and phase 2 implantations at SF ECoE.
- ▶ Get new EEG equipment and/or system/software upgrades at multiple sites in FY19 or FY20.

### Houston Fellowships:

The Michael E. DeBakey VA Medical Center (MEDVAMC) supports two FTE for the Clinical Neurophysiology & Epilepsy Fellowship programs. The fellows rotate at the MEDVAMC approximately 1/3 of their fellowship.

Name	Fellowship	VA FTE	Start Date	End Date
Sonam Verma, MD	Clinical Neurophysiology	0.33	07/01/17	06/30/18
Myrtle Jeroudi, MD	Clinical Neurophysiology	0.33	07/01/17	06/30/18
Ammar Alobaidy, MD	Clinical Neurophysiology	0.33	07/01/17	06/30/18
Audrey Nath, MD	Clinical Neurophysiology	0.33	07/01/17	06/30/18
Kim Houck, MD	Epilepsy	0.33	07/01/17	06/30/18
Dana Marafie, MD	Epilepsy	0.33	07/01/17	06/30/18

### San Francisco Fellowships:

Name	Fellowship	ACGME	VA FTE	Start Date	End Date
Jon Kleen, MD, PhD	Epilepsy	Yes	0.5	07/01/18	06/30/19
Brandy Ma, MD	Epilepsy	Yes	0.5	07/01/17	06/30/18
Phillip Larimer, MD, PhD	Epilepsy	Yes	0.5	07/01/17	06/30/18
Proleta Datta, MD, PhD	Polytrauma Epilepsy	No	0.5	07/01/17	06/30/18
Brandy Ma, MD	Polytrauma Epilepsy	No	0.5	07/01/18	06/30/19

### WLA Fellowships:

Name	Fellowship	ACGME	VA FTE	Start Date	End Date
Jin Chae, MD	PGY-2 Neurology Specialty Pharmacy Resident	Yes	1.0	07/01/17	06/30/18
Leah Loewenstein, MD	PGY-2 Neurology Specialty Pharmacy Resident	Yes	1.0	10/01/17	09/30/18
Lillian Chi, MD	PGY-2 Neurology Specialty Pharmacy Resident	Yes	1.0	07/01/18	09/30/19
Joanna Gan, MD	Epilepsy	Yes	1.00	07/01/17	06/30/18
George Lai, MD	Epilepsy	Yes	1.00	07/01/18	06/30/19
George Lai, MD	Clinical Neurophysiology	Yes	1.00	07/01/17	06/30/18
Bertrand Tseng, MD	Clinical Neurophysiology	Yes	1.00	10/01/17	09/30/18
Daniel Vitantonio, MD	Clinical Neurophysiology	Yes	1.00	07/01/18	06/30/19
Syedali Hejazi, MD	Clinical Neurophysiology	Yes	1.00	07/01/18	06/30/19

## Publications/Presentations | Southwest Region

### Albuquerque

#### ■ PUBLICATIONS / MANUSCRIPTS / CHAPTERS:

Davis, L. E., Harnar, J., Lachey-Barbee, L. A., Richardson, S. P., Fraser, A., & King, M. K. (2018). Using Teleneurology to Deliver Chronic Neurologic Care to Rural Veterans: Analysis of the First 1,100 Patient Visits. *Telemedicine and E-Health*. doi:10.1089/tmj.2018.0067.

#### ■ ABSTRACTS / POSTERS / PRESENTATIONS:

### Houston

#### ■ PUBLICATIONS / MANUSCRIPTS / CHAPTERS:

Chen, D.K. (2017). Neuropsychiatric co-morbidities in epilepsy. In ed. Haneef Z. A concise manual of epilepsy, 3rd edition, *Neurogroups publications*; Boston.

Chen, D.K., Chu, J., & Hrachovy, R.A. (2018). Electroencephalography. In eds. Husain AM, Tran TT: Veterans Affairs Epilepsy Manual, Second Edition. *Department of Veterans Affairs*. Washington, DC.

Chen DK. (2018). Recognizing imitators of epilepsy. eLearning program. Veterans' Health Administration Employee Education System.

Chen DK & LaFrance Jr WC. (2018). Neuropsychiatric aspects of epilepsy. In eds. Arciniegas, DB, Yudofsky SC, Hales, RE. Textbook of Neuropsychiatry and Behavioral Neuroscience, 6th edition, *The American Psychiatric Publishing*.

Chen DK & LaFrance Jr WC. (2018). Nonepileptic attacks. In eds. Schomer DL, Lopes da Silva F. Niedermeyer's encephalography, 7th edition, *Lippincott Williams and Wilkins*; Philadelphia.

Chen DK. (2018). Psychogenic nonepileptic seizures. In eds. Garcia P, Dashe JF. UpToDate® ([www.uptodate.com](http://www.uptodate.com)), *Wolters Kluwer*.

Jung Y, Chen DK, Bullock K, Ries S, Hamid H, & LaFrance WC Jr. (In Press). Therapists' impression before and after training in treatment of PNES. In eds. Schachter SC, LaFrance Jr WC. Gates and Rowan's Nonepileptic seizures, 4th edition, *Cambridge University Press*; Cambridge.

Jalali A & Yoshor D (In Press). Surgical Treatment of Extratemporal Epilepsy, in Gross R (ed) Neurosurgical Operative Atlas: *Functional Neurosurgery*, Thieme, Stuttgart, Germany.

Chen, D. K., Sharma, E., & LaFrance, W. C. (2017). Psychogenic Non-Epileptic Seizures. *Current Neurology and Neuroscience Reports*, 17(9). doi:10.1007/s11910-017-0781-7.

Grabyan, J. M., Collins, R. L., Alverson, W. A., & Chen, D. K. (2017). Performance on the Test of Memory Malingering is predicted by the number of errors on its first 10 items on an inpatient epilepsy monitoring unit. *The Clinical Neuropsychologist*, 32(3), 468-478. doi:10.1080/13854046.2017.1368715.

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Chen, D. K., Dave, H., Gadelmola, K., Jeroudi, M., & Fadipe, M. (2018). Provocative induction of psychogenic nonepileptic seizures: Noninferiority of an induction technique without versus with placebo. *Epilepsia*. doi:10.1111/epi.14570.

Rossetti, M. A., Collins, R. L., & York, M. K. (2017). Performance Validity in Deep Brain Stimulation Candidates. *Archives of Clinical Neuropsychology*, 33(4), 508-514. doi:10.1093/arclin/acx081.

- Robinson, J. S., Collins, R. L., Miller, B. I., Pacheco, V. H., & Wisdom, N. M. (2017). The Severe Impairment Profile: A Conceptual Shift. *Archives of Clinical Neuropsychology*, 33(2), 238-246. doi:10.1093/arclin/acx069.
- Proto, D., Collins, R.L., & Grabyan, J. (submitted). Performance and symptom validity in Veteran's with Epilepsy and Psychogenic Non-epileptic events.
- Stinson, J., Chang, J., Robsinson, J., Passler, J., & Collins, R.L. (submitted). Validation and Utilization of the Patient Competency Rating Scale (PCRS) in an Epileptic and Non-Epileptic Population.
- McCulloch, K., Collins, R. L., Pacheco, V., Nguyen, T., Alverson, & A. Kass, J. (submitted). Limitations of the MMSE & MOCA in Assessing Mild Cognitive Impairment in a Mixed Clinical Sample.
- You, J.C., Muralidharan, K., Park, J.W., Petrof, I., Pyfer, M.S., Corbett, B.F., LaFrancois, J.J., Zheng, Y., Zhang, X., Mohila, C.A., Yoshor D., Rissman, R.A., Nestler, E.J., Scharfman, H.E., & Chin, J. (2017). Epigenetic suppression of hippocampal calbindin-D28k by  $\Delta$ FosB drives seizure-related cognitive deficits; *Nature Medicine* 23(11):1377-1383.
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- Chiang, S., Guindani, M., Yeh, H. J., Dewar, S., Haneef, Z., Stern, J., & Vannucci, M. (2017). A Hierarchical Bayesian Model for the Identification of PET Markers Associated to the Prediction of Surgical Outcome After Anterior Temporal Lobe Resection. *Frontiers Neuroscience*. PMID: 29259537.
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Kragel, J. E., Ezzyat, Y., Sperling, M. R., Gorniak, R., Worrell, G. A., Berry, B. M., Sheth, S. A., ... Kahana, M. J. (2017). Similar patterns of neural activity predict memory function during encoding and retrieval. *NeuroImage*, 155, 60-71. doi:10.1016/j.neuroimage.2017.03.042.

Ezzyat, Y., Kragel, J. E., Burke, J. F., Levy, D. F., Lyalenko, A., Wanda, P., Sheth, S. A., ... Kahana, M. J. (2017). Direct Brain Stimulation Modulates Encoding States and Memory Performance in Humans. *Current Biology*, 27(9), 1251-1258. doi:10.1016/j.cub.2017.03.028.

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#### ■ ABSTRACTS / POSTERS / PRESENTATIONS:

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Coonan EE, Hirsch LJ, Duckrow RB, Chen DK, Gelfand M, Blum A, Hixon J, LaFrance WC Jr, Drzkowski J, Benbadis SR, Cascino G, & Tatum WO. (December 2017). Outpatient Smartphone Videos in Epilepsy (OSmartViE): Initial Results of Video Quality. Presented at the *71th American Epilepsy Society Meeting*, Houston Texas. (poster 3.070).

Tatum WO, Hirsch LJ, Duckrow RB, Chen DK, Gelfand M, Blum A, Hixon J, LaFrance WC Jr, Drzkowski J, Benbadis SR, & Cascino G. (December 2017). Outpatient smartphone videos for classifying epileptic and non-epileptic seizures. Presented at the *71st American Epilepsy Society Meeting*, Houston Texas, (poster 3.161).

Collins, R. Alverson, A. Grabyan, J. Dunn, C. Sheppard, D., & Stinson, J. (2018). WHODAS 2.0 and Symptom Validity in an Inpatient Seizure Disorder Sample. Presented at the 46th Annual Meeting of the International Neuropsychological Society, Washington, DC.

Alverson, A., Collins, R. Grabyan, J. Dunn, C. Sheppard, D., & Stinson, J. (2018). Interrelations Among Cognition, Symptom Validity, Depression, and Self-Reported Disability. Presented at the 46th Annual Meeting of the International Neuropsychological Society, Washington, DC.

Grabyan, J., Nguyen, T. & Collins, R. (2017). Performance on the First Trial of the Word Memory Test Predicts Failure on Later Trials. Presented at the 46th Annual Meeting of the International Neuropsychological Society, Washington, DC.

Van Ness PC, Chen DK, Haneef Z, & Yoshor D. (2017). Diurnal variation of potential ictal onsets detected by a responsive neurostimulation (RNS) device. Presented at the 32nd International Epilepsy Congress, Barcelona, Spain. Poster 1044.

Fadipe, M. & Bowman, B. (2017). Improving Health Literacy in Veterans with Epilepsy. Presented at the 16th Annual Health Literacy Conference, Irvine, California.

Fadipe, M. & Bowman, B. (2018). Improving Clinical Outcomes in Acutely ill Neurological Patients. Presented at the 50th Annual American Association of Neuroscience Nurses Educational Meeting, San Diego, California.

Haneef Z. (2017). Spectral Analysis of dynamic functional connectivity between resting state networks reveals information beyond static connectivity. *American Academy of Neurology*, Los Angeles, California.

Haneef Z. (2017). Temporal and spectral characteristics of dynamic functional connectivity between resting-state networks in temporal lobe epilepsy. *American Academy of Neurology* 69th Annual Meeting, Boston, MA.

## San Antonio

- PUBLICATIONS / MANUSCRIPTS / CHAPTERS:

- ABSTRACTS / POSTERS / PRESENTATIONS:

## San Francisco

- PUBLICATIONS / MANUSCRIPTS / CHAPTERS

Salinsky, M., Rutecki, P., Parko, K., Goy, E., Storzbach, D., Oneil, M., ... Joos, S. (2018). Psychiatric comorbidity and traumatic brain injury attribution in patients with psychogenic nonepileptic or epileptic seizures: A multicenter study of US veterans. *Epilepsia*, 59(10), 1945-1953. doi:10.1111/epi.14542.

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#### ■ ABSTRACTS / POSTERS / PRESENTATIONS:

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John D Hixson, Stephen Yates, Bosny Pierre-Louis, Robert Warnock, Edward Han-Burgess, Shweta Joshi, Jonathan Williams, Marla Gorges, Steven Vandamme, Joseph Robertson, & Ali Bozorg (2018). Adequacy of patient information in electronic medical records and claims sources – an exploratory, retrospective record review to guide development of an antiepileptic drug treatment decision support system (TDSS) (submitted for AES, New Orleans).

Edward Han-Burgess, Ali Bozorg, John D Hixson, Bosny Pierre-Louis, Shweta Joshi, & Stephen Yates. (2018). Treatment decision support systems (TDSS) in epilepsy – exploring proxy validity and overall clinical outcome success related to TDSS-predicted antiepileptic drug (AED) choices. (submitted for AES, New Orleans).

Mueller SG, Knowlton R, & Laxer KD. (2018). Structural and Functional Abnormalities in the Autonomic Network beyond the Brainstem in Focal Epilepsy. *Partners Against Mortality in Epilepsy Conference*, Alexandria, VA.

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Patricia Osborne Shafer; Joseph I. Sirven; Jody Kakacek; Steven Owens; Jesse Fishman; Vicki Kopplin; Russell Derry; Mark Findley, Wendy R. Miller; John Hixson; Karen Parko, Marianna V. Spanaki, and Epilepsy Foundation Connectors Project. (2017). Meeting the Needs of Clinicians, People with Epilepsy, and Caregivers in Underserved Areas. *American Epilepsy Society Meeting*, Washington, DC.

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## West LA

### ■ PUBLICATIONS / MANUSCRIPTS / CHAPTERS:

Bailey JN, de Nijs L, Bai D, Suzuki T, Miyamoto H, Tanaka M, Patterson C, Lin YC, Medina MT, Alonso ME, Serratosa JM, Durón RM, Nguyen VH, Wight JE, Martínez-Juárez IE, Ochoa A, Jara-Prado A, Guilhoto L, Molina Y, Yacubian EM, López-Ruiz M, Inoue Y, Kaneko S, Hirose S, Osawa M, Oguni H, Fujimoto S, Grisar TM, Stern JM, Yamakawa K, Lakaye B, Delgado-Escueta AV. (2018). Variant Intestinal-Cell Kinase in Juvenile Myoclonic Epilepsy. *NEJM*. 378(11):1018-1028. doi: 10.1056/NEJMoa1700175.

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Sunita Dergalust, Pharm D. Anti-Epileptic Drugs: First Generation. In: Husain and Tran eds. Department Of Veterans Affairs Epilepsy Manual. Second Editions Published by *Epilepsy Centers of Excellence, Department of Veterans Affairs* Washington, DC.

### ■ ABSTRACTS / POSTERS / PRESENTATIONS:

George Lai, Jean-Phillipe Langevin, Ralph J. Koek, Scott E. Krahl, Ausaf A. Bari, James W.Y. Chen. (to be presented in 2019). Mapping of Acute Deep Brain Stimulation (DBS) Effects in Two Patients with Refractory Post Traumatic Stress Disorder (PTSD) *Third International Brain Stimulation Conference*, Vancouver, BC, Canada.

Ralph J. Koek, Jean-Philippe Langevin, Scott E. Krahl, James W.Y. Chen, David L. Sultzer, Mark J. Mandelkern, Alexis D. Kulick. (to be presented in 2019). Basolateral amygdala deep brain stimulation for treatment refractory combat PTSD: data from the first two cases, *Third International Brain Stimulation Conference*, Vancouver, BC, Canada.

Alexander Crossley, Hyo-Jin Chae, Sunita Dergalust & Andrew Wilson. (2018) Perception of Effectiveness of Anti-Epileptic Drugs in Veterans with Drug-Resistant Epilepsy. *AES 2018 Annual Meeting*, New Orleans, LA.

Lillian Chi, Alexander Crossley, Hyo-Jin Chae & Sunita Dergalus. (2018) Evaluation of Anti-Epileptic Drug Discontinuation in the Veteran Population with Focal Onset Epilepsy at the Veterans Affairs Greater Los Angeles Medical Center. *AES 2018 Annual Meeting*, New Orleans, LA.

Naylor DE. (2018) Stimulus Conditions Shift Spatio-Temporal Patterns of GABA-A Receptor Activation at Synaptic and Extrasynaptic Sites to Tune and Synchronize Hippocampal Networks. *American Neurological Association 2018*. Atlanta, GA.

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Naylor DE. (2018). Synchronized GABA Release Inversely Desensitizes and Diminishes Synaptic but Accentuates Spillover to Extrasynaptic GABA-A Receptors in a Progressive Frequency-Dependent Manner. *American Epilepsy Society 2018*. New Orleans, LA.

Kan, N. (2018). "Effect of a Nurse Education Program to Establish a Safe Epilepsy Monitoring Unit". *American Association of Neuroscience Nurses 50th Annual Educational Meeting*, San Diego, CA.

B. Toh, W. Duong, M. Porter L. Loewenstein, F. Bertone, S. Dergalust. (2018) Does A Drug Refractory Epilepsy (DRE) diagnosis impact time to seizures in the Epilepsy Monitoring Unit (EMU). *Annual AAN Conference*, Los Angeles, CA.

A. Vu, K. Yuge, L. Loewenstein, H. Chae M. Wen, F. Bertone, S. Dergalust. (2018). Evaluation of IncobotulinumtoxinA as Prophylactic Treatment of Chronic Headache in Veterans. *Annual AAN Conference*, Los Angeles, CA.

H. Chae, A. Crossley, L. Loewenstein, M. Porter, F. Bertone, S. Dergalust. (2018). Managing Drug Resistant Epilepsy (DRE) in the Veteran Population. *Annual AAN Conference*, Los Angeles, CA.

Alexander Crossley, Sunita Dergalust, Stacey De Peralta, Viet-Houng Nguyen. (2017). Development of a Revised Equation for Estimation of Corrected Total Phenytoin Levels in Hospitalized Veterans. *Annual Meeting of the American Epilepsy Society* Washington, DC.

Alenoush Aramian, Hyo-Jin Chae, Alexander Crossley, Mary Porter, Viet-Huong Nguyen, Sunita Dergalust. (2017). Predicting Drug Resistance in Veterans with Focal Onset Epilepsy. *Annual Meeting of the American Epilepsy Society*, Washington, DC.

Shivani Mukhi, Maya Seernani, Koushalya Sachdev, Krishan Sachdev, Viet-Houng Nguyen, Sunita Dergalust. (2017). Impact of ACA on AED coverage in Medicaid patients with epilepsy. *Annual Meeting of the American Epilepsy Society*, Washington, DC.

Naylor DE. (2018). Shifting patterns of synaptic and extrasynaptic GABA-A receptor activation explain the loss of inhibition and emergence of synchrony during seizure evolution. *Winter Conference on Brain Research 2018*.

#### ■ PODIUM PRESENTATION:

Kan, N., Nguyen, V., & Chen, S. (2018). Management of Epilepsy with Antiepileptic Drugs. *American Association of Neuroscience Nurses 50th Annual Educational Meeting*, San Diego, CA.

#### ■ WEBINAR

Kan, N. (May, 2018). Surgical Therapies for Epilepsy. *Epilepsy Centers of Excellence Patient and Caregiver Webinar*.

Chen, JWY. (July, 2018). Responsive Neurostimulation. *Epilepsy Centers of Excellence Clinician Webinar*.

## Research/Grants | Southwest Region

### Houston

Principal Investigators Last, First, MI	Grant/Study Title	Project Start Date	Project End Date	Name of Funding Source
Chen, David, Site Principal Investigator	Risk Factors in the Development of Posttraumatic Epilepsy			DOD (Pre-application accepted)
Chen, David, Site Principal Investigator	Treatment of Psychogenic Non-epileptic Seizures in U.S. Veterans			VA Cooperative Studies Program, LOI accepted
Chen, David, Site Principal Investigator	Detecting psychogenic nonepileptic seizures with single-channel sEMG	11/2017	11/2018	Brain Sentinel
Yoshor, Daniel, Site Principal Investigator	BISC Bioelectronic Interfacing to Sensory Cortex with massive, fully implanted, flexible wireless CMOS surface recording and stimulating arrays	04/24/2017	04/23/2021	Defense Advanced Research Projects Agency (DARPA)
Yoshor, Daniel, Principal Investigator	Visual Form Perception Produced by Electrically Stimulating Human Visual Cortex”c NIH R01EY023336	9/1/2013	8/31/2018	National Eye Institute National Institutes of Health
Sheth, Sameer, Principal, Investigator	Deep Brain Stimulation for Depression Using Directional Current Steering and Individualized Network Targeting	9/2017	8/2022	UH3 NS103549, NINDS
Sheth, Sameer, Principal Investigator	Cognitive Control Mechanisms in Human Prefrontal Cortex	4/2016	3/2021	R01 MH106700, NIMH.

### San Francisco

Principal Investigators Last, First, MI	Grant/Study Title	Project Start Date	Project End Date	Name of Funding Source
Mueller, Susanne (PI); Garga, Nina (co-investigator)	The Imprint of Psychogenic Nonepileptic Seizures on the Brain: A New Model and Imaging Biomarker	09/01/2017	09/01/2020	DOD/CDMRP
Parko, Karen (site PI); Salinsky, Martin (PI)	Characteristics of Veterans with Epilepsy	08/12/2012	Present	VA Merit Review Award (CSR&D)
Mueller, Susanne (co-investigator, site PI)	Center for SUDEP Research: Morphometrics Core	09/01/2014	08/31/2019	NIH/NINDS
Parko, Karen (site PI); Chen, David (PI)	Novel Group Treatment for Patients with Non-Epileptic Seizures	08/30/2016	Present	
Hixson, John (National PI)	Peer Support for U.S. Veterans with Epilepsy	01/01/2018	12/31/2019	UCB Inc.

## West LA

Principal Investigators Last, First, MI	Grant/Study Title	Project Start Date	Project End Date	Name of Funding Source
Wasterlain, Claide	UO1 NS074926-01 (PI), (NINDS). Rational polytherapy in the treatment of cholinergic seizures \$3,239,509	09/01/2011	08/31/2018	NIH
Golshani, Peyman	Optogenetic treatment of social behavior in autism. \$1,250,000	08/01/2013	07/31/2018	NIMH (RO1MH101198-1)
Golshani, Peyman; Xu, Xiangmin	Inhibitory neuron circuit organization and function in prefrontal cortex. \$1,705,664	07/01/2015	06/30/2020	1R01MH105427-01A1
Golshani, Peyman	UCLA Center for Translational Research in Neurodevelopment: Direct funding to Golshani Lab \$625,000 (UC-TRaN). Main project title: Neurophysiological biomarkers of cognition in Dup15 syndrome: From mouse models to patients.	09/01/2015	08/30/20120	NIH/NICHD: U54
Golshani, Peyman; Markovic; Khakh; Silva	Building the next generation of wireless, two-channel miniaturized microscopes for imaging freely moving mice. Total direct funding: \$1,665,000	09/30/2015	09/30/2018	
Golshani, Peyman; Levine, Michael	Cortical pathophysiology in Huntington's disease. Total direct funding: \$1,700,000	07/01/2016	06/30/2021	1R01NS096994-01A1

# National ECoE Workgroups



## Basic Science Research Seminar Group

### VA Puget Sound Health Care System

1660 S Columbian Way, Seattle, WA 98108

(206) 616-7085

<https://www.pugetsound.va.gov/services/epilepsy.asp>

**Co-Chair: Christopher Ramson, MD, and Nikolai Dembrow, PhD**

**Admin Support: Linda Benson, MPH**

Workgroup Members		
Christopher B. Ransom, MD, PhD – Seattle	Alan Towne, MD – Richmond	Cha-Min Tang, MD, PhD – Baltimore
William Spain, MD – Seattle	Robert Kotloski, MD, PhD – Madison	Claude Wasterlain, MD – Los Angeles
Nikolai Dembrow, PhD – Seattle	Andre Lagrange, MD, PhD – Nashville	Jack Parent, MD – Michigan
Paul Rutecki, MD – Madison		

### FY18 ACCOMPLISHMENTS:

- ▶ ECoE Basic Science Workgroup Teleconference calls FY2018
  - 10/18/2017: Nina Gross and Nikolai Dembrow presenting: "Systematic review and meta-analysis of differentially expressed miRNAs in experimental and human temporal lobe epilepsy."
  - 11/22/2017: Round Table Discussion: "Recap of Highlights at the Annual Society for Neuroscience Meeting with a focus on Traumatic Brain Injury and Epilepsy and In vivo Imaging of Epilepsy in model systems."
  - 12/13/2017: Round Table Discussion: "Key Basic Research Findings from the annual American Epilepsy Society meeting."
  - 01/10/2018: Alejandro P. Becerra, "Targeted optogenetic control of cortical pyramidal neurons to regulate cortical spreading depression."
  - 02/07/2018: Round Table Discussion: "Proposal Planning for a national meeting: Pathways to Prevention and Treatment of Acquired Epilepsy."
  - 03/14/2018: Jack M. Parent, Dep. Neurology University of Michigan "In vivo Gene Editing and Human Cellular Models of Genetic Epilepsies."
  - 04/11/2018: Journal Club Discussion led by Nikolai Dembrow "Electrophysiological evidence for the development of a self-sustained large-scale epileptic network in the kainate mouse-model of temporal lobe epilepsy."
  - 05/09/2018: David Naylor MD, PhD at Department of Neurology UCLA "Probing Seizure Mechanisms with Physiologically and Pharmacologically-Based Multi-Scale Computational Models."
  - 06/13/2018: Discussion Round Table, led by Cha-Min Tang from Baltimore Maryland VA. Research Plans regarding a collaborative merit review regarding different methods of examining TBI-induced epilepsy.

- 07/11/2018: Robert Kotloski, MD, PhD at William S. Middleton Veterans Memorial Hospital "Genetic background influences electrophysiologic activity and BDNF in the setting of acute TBI."
  - 07/25/2018: Cha-Min Tang MD, PhD at Baltimore Maryland VA. "Deafferentation Animal Model of Post-Traumatic Epilepsy."
  - 08/08/2018: Journal Club Discussion, led by Nikolai Dembrow. "Commonalities in epileptogenic processes from different acute brain insults: Do they Translate?" and "2014 NINDS Benchmarks for epilepsy research."
  - 09/12/2018: Round Table Discussion, led by Paul Rutecki: "Recap of VA Roadmap for the ECoE Planning meeting and edits for proposed Roadmap to submit."
- ▶ Workgroup members are actively engaged in basic science research projects; accomplishments are listed by site elsewhere in annual report.
  - ▶ Teleconferences with basic science research presentations by VA- and non-VA investigators. These teleconferences have been very well received.
  - ▶ Meeting September 6-7 to develop epilepsy roadmap for basic science research and collaborative merit proposals.

#### **FUTURE INITIATIVES:**

- ▶ Continue to expand the national audience with goal of providing richer discussion and new perspectives on basic science topics through broader participation.
- ▶ Discuss plans and strategies to develop collaborative research efforts between sites, with focus on TBI-related epileptogenesis using blast-injury or cortical impact models. Submit collaborative merit grant.

## Clinical Research Workgroup

**Chair: Alan Towne, MD, MPH**

**Admin Support: Linda L. Benson, MPH**

Workgroup Members		
Alan Towne – <i>Chair, Richmond</i>	Rizwana Rehman – <i>Durham</i>	Allan Krumholz – <i>Baltimore</i>
Linda L. Benson – <i>Admin, Richmond</i>	Karen Parko – <i>San Francisco</i>	R. Andrew David – <i>Baltimore</i>
Curt LaFrance – <i>Providence</i>	Maria Lopez – <i>Miami</i>	Mary Jo Pugh – <i>Salt Lake City</i>
Hamada Altalib – <i>West Haven</i>	Paul Rutecki – <i>Madison</i>	Chris Ransom – <i>Seattle</i>
Tung Tran – <i>Durham</i>	Martin Salinsky – <i>Portland</i>	

### FY18 ACCOMPLISHMENTS:

- ▶ Expanded use of national ECoE epilepsy monitoring unit database with TBI variables to include consortium/affiliate sites.
- ▶ Epidemiology of Epilepsy and TBI project (Pugh) and collaboration with CENC Longitudinal Study Project Aim #4.
- ▶ LaFrance and Hamid continued CBT training for PNES initiative.
- ▶ Continue to obtain normalized volumetric NeuroQuant data from brain MRI's in patients with TBI.
- ▶ Initiated Brain Sentinel device trial, Detecting PNES w Single-Channel sEMG device.

### FUTURE INITIATIVES:

- ▶ Develop and submit abstract from EMU database.
- ▶ Peer Support Study (UCB)
- ▶ Treatment of PNES in U.S. Veterans, Coop study (LaFrance and Salinsky)
- ▶ Develop a protocol for dense array EEG guided TMS or TDCS in TBI.
- ▶ Examine other collaborative arrangements with outside agencies, including the Kessler Institute.
- ▶ Developing TBI and epilepsy initiative with CURE.
- ▶ Explore research opportunities and shared resources between the Headache Centers of Excellence (HCoE) and ECoE.

## Education Workgroup

**Chair: R. Andrew David, MS, MHSA**

**Acting Pamela Kelly, DHA, MBA/HCM**

Workgroup Members		
Andrew David – <i>Chair</i>	Angela Young	Pamela Kelly
Maria Lopez	Janice Broughton	Judy Ozuna
Denise Riley	Ann Carncross	Karen Parko
Paul Rutecki	David Chen	Mary Jo Pugh
Janet Spencer	Winona Finley	Guiomar Scheid
Tung Tran	Nina Garga	

### FY18 ACCOMPLISHMENTS:

- ▶ Restarted ECoE education webinar series
  - Five accredited clinician webinars:
    - ▷ 03/07/2018: "*Bone Health*" – Clinician CME: Ann Van Cott, MD  
<http://va-eerc-ees.adobeconnect.com/po77tiugu74b/>
    - ▷ 05/02/2018: "*Epilepsy Women of Child Bearing Age*" – Clinician CME: Nina Garga, MD  
<http://va-eerc-ees.adobeconnect.com/pxc6k1wh25bx/>
    - ▷ 07/11/2018: "*Responsive Neurostimulation*" - Clinician CME: James Chen, MD  
<http://va-eerc-ees.adobeconnect.com/py52jvufaa1s/>
    - ▷ 09/05/2018: "*Evaluation and Management of a First Seizure*" - Clinician CME: Allan Krumholz, MD  
<http://va-eerc-ees.adobeconnect.com/p5eygp4rkmd5/>
    - ▷ 11/07/2018: "*Sudden Unexpected Death in Epilepsy*" – Clinician CME: Tung Tran, MD  
<http://va-eerc-ees.adobeconnect.com/pdgua4ifluj2/>
  - Nine accredited patient and caregiver webinars:
    - ▷ 02/01/2018: "*Seizure Alert Dogs*" – Patient/Caregiver: Tracy Broomhead, MN, RN  
<http://va-eerc-ees.adobeconnect.com/pj7k8lsuu1mg/>
    - ▷ 03/01/2018: "*Epilepsy Monitoring Unit Admissions*" – Patient/Caregiver: Sharon Bottomley, MSN, RN  
<http://va-eerc-ees.adobeconnect.com/pebne8fz15dr/>
    - ▷ 04/05/2018: "*Women & Epilepsy: Challenges & Triumphs*" – Patient/Caregiver: Natacha Jean-Noel, MSN  
<http://va-eerc-ees.adobeconnect.com/pzicmb2z7vrw/>
    - ▷ 05/03/2018: "*Surgical Therapies for Epilepsy*" – Patient/Caregiver: Natalya Kan, BSN, RN, CNRN  
<http://va-eerc-ees.adobeconnect.com/pc419sy9vzuy/>
    - ▷ 06/07/2018: "*Epilepsy and Alcohol*" – Patient/Caregiver: Kimberly Heckmann, MS, RN  
<http://va-eerc-ees.adobeconnect.com/pvbb76fh5ha7/>
    - ▷ 07/12/2018: "*Driving & Epilepsy*" – Patient/Caregiver: Allan Krumholz, MD  
<http://va-eerc-ees.adobeconnect.com/ptvof573hp45/>

- ▷ 08/02/2018: "Over-the-Counter Medications" – Patient/Caregiver: Kathy Tortorice, PharmD  
<http://va-eerc-ees.adobeconnect.com/psftfly5yzgq/>
- ▷ 09/06/2018: "Living with Epilepsy" – Patient/Caregiver: Janet Spencer  
<http://va-eerc-ees.adobeconnect.com/phkp1ilkklw/>
- ▷ 10/04/2018: "Medication Adherence" – Patient/Caregiver: Kathy Tortorice, PharmD  
<http://va-eerc-ees.adobeconnect.com/pqzw69ohz6sp/>
- ▶ Two accredited VA Talent Management System education modules released
  - Anti-Epileptic Drugs
  - Recognizing Imitators of Epilepsy
- ▶ Veterans & Epilepsy Basic Training
  - Developing one new YouTube video
    - ▷ Women's focused issues (in post-production)

#### **FUTURE INITIATIVES:**

- ▶ Continue revived clinician and patient and caregiver webinars
  - Host six accredited clinician webinars
  - Host five patient webinars
  - Partner with Epilepsy Foundation to improve reach of patient and caregiver webinars
- ▶ Veterans & Epilepsy: Basic Training - develop two new videos

## EEG Technologist Workgroup

**Chair: Ronda Tschumper, R.EEG/EPT., CLTM**

**Admin Support: Ronda Tschumper, R.EEG/EPT., CLTM**

<b>NW Acting AO</b> Ronda Tschumper	<b>NE AO</b> Andrew David	<b>SW AO</b> Vacant	<b>SE AO</b> Pamela Kelly
<b>NORTHWEST</b> Martin Salinsky	<b>NORTHEAST</b> Alan Krumholz	<b>SOUTHWEST</b> Nina Garga	<b>SOUTHEAST</b> Aatif Husain
<p><b>MADISON</b> <b>John C. Jones</b> Ronda Tschumper Vonda Elmer Joan Schultz Brittany Schmidt-Hess</p> <p><b>MINNEAPOLIS</b> <b>Stephen Holloway</b> Melanie Seal Yuliya Volkov</p> <p><b>PORTLAND</b> <b>Martin Salinsky</b> Michael Wilson Bryanna Lilies</p> <p><b>SEATTLE</b> <b>William Spain</b> Debra Marwitz-Perkins Larissa Ronich</p>	<p><b>BALTIMORE</b> <b>Alan Krumholz</b> James Coleman</p> <p><b>RICHMOND</b> <b>Alan Towne</b> Rachel Van Aken Sharon Banks Brenda Robert-Wilson</p> <p><b>WEST HAVEN</b> <b>Hamada Altalib</b> James Vera Dominica Rodriguez</p>	<p><b>ALBUQUERQUE</b> <b>Larry Davis</b> Robert Spears</p> <p><b>HOUSTON</b> <b>David Chen</b> Betty Calahan Ritu Jain Phenita Groves Harold Walker Debra Dennis Rodney Hall Roy Batiste</p> <p><b>SAN ANTONIO</b> <b>Joshua Robert</b> Deborah Hernandez Norma Ferguson</p> <p><b>SAN FRANCISCO</b> <b>Nina Garga</b> Janice Broughton Jeffrey Reznic</p> <p><b>WEST LOS ANGELES</b> <b>James Chen</b> Joaquin Barreda</p>	<p><b>DURHAM</b> <b>Tung Tran</b> Margaret Young Josie Brame Susan Hayes Lisa Sisk</p> <p><b>GAINESVILLE</b> <b>Stephan Eisenschenk</b> Paula Crew</p> <p><b>MIAMI</b> <b>Maria Lopez</b> Rosario Carballo Michael Perez</p> <p><b>TAMPA</b> <b>Alfred Frontera</b> Cynthia Jackson Chris Holt</p>
<b>CONSORTIUM MITs</b>			
<p><b>Captain James A. Lovell</b> Valerie Krasne</p> <p><b>Hines</b> Paz Martinez</p> <p><b>Iron Mountain</b> Patty Leatherman</p> <p><b>Jesse Brown</b> Mary Ocansey Victor Cabrales</p> <p><b>Milwaukee</b> Juba Mattice</p>	<p><b>Boston</b> Carol Riley</p> <p><b>Cleveland</b> Galina Khutoryan</p> <p><b>Huntington WV</b> Mary Miller</p> <p><b>Pittsburgh</b> Donna Leppla Diane White</p> <p><b>Stratton</b> Tarita Owens</p>	<p><b>Boise</b> Michael Brown</p> <p><b>San Diego</b> Richie Secody</p> <p><b>El Paso</b> Elva Richey</p>	<p><b>Fayetteville</b> Debra Goozner</p> <p><b>Little Rock</b> Corena Johnson Larae Bearden</p> <p><b>Orlando</b> Steven Castaneda</p> <p><b>Salisbury, NC</b> Ashley Griffin</p>

## FY18 ACCOMPLISHMENTS:

- ▶ **Purple Day® For Epilepsy Awareness Around The World – March 25, 2018**  
Spread the awareness of seizures/epilepsy  
Megan Cassidy (Founder of **Purple Day**) – *"I hope to try and help erase the stigma associated with epilepsy world-wide because epilepsy doesn't discriminate, people do."*  
VA ECoE Table at Epcot in Florida - information on Epilepsy and Seizures in Veterans
- ▶ **Epilepsy Awareness Fair – April 18th, 2018** – staff encouraged to wear purple  
Information on Epilepsy and Seizures in Veterans  
MIT Techs, Nursing Staff and ECoE physician were available to advocate about the Epilepsy Center of Excellence and discuss the importance of Seizure First Aid.
- ▶ **2018 ASET ECoE Information Booth – New Orleans, LA – August 16-18, 2018**  
*Northwest:* Ronda Tschumper (Madison) and Yuliya Volkov (Minneapolis)  
*Southwest:* Janice Broughton (San Francisco)
- ▶ **Remote Access:** Tampa VA and Little Rock VA
- ▶ **Functional Statements/Boarding:** West Haven VA and Stratton VA
- ▶ **Functional Statements/Protocols:** New Orleans VA
- ▶ **EEG Competencies:** El Paso VA
- ▶ **On Call:** Survey
- ▶ **MIT Tech Credentialing/CEUs:** Pittsburgh VA
- ▶ **Wireless Recordings:** Minneapolis VA
- ▶ **Grade Levels within the ECoE:** Survey
- ▶ **Professional Board Member:** Recommendations (VISN 6, 8, 16, 23)
- ▶ **Case studies:** incorporated with each call for continuing learning opportunities and discussing "Best Practices"
- ▶ **Updates:** ABRET Credentialing (Lifetime) and ASET Educational Opportunities

## FUTURE INITIATIVES / FY19 GOALS:

- ▶ Interact with appropriate personal for developing a purchase mechanism for an equipment contract
- ▶ Develop National SOP: Remote access and store and forward
- ▶ Maintain Standard Routine Procedures and Long-Term Monitoring – Following the ACNS Guidelines
- ▶ Continued efforts to increase consortium and non-consortium site involvement
- ▶ Continued efforts to provide information for ABRET Registration in EEG and LTM
- ▶ Continued efforts to seek educational opportunities offered by ASET

## Mental Health Workgroup

**Chair: Hamada Hamid Altalib, DO**

**Acting Admin Support: Linda Benson, MPH**

Workgroup Members		
Hamada Hamid Altalib – <i>Chair, West Haven</i>	Yoon Jung – <i>Durham</i>	Janice Marceaux – <i>San Antonio</i>
R. Andrew David – <i>Admin, Baltimore</i>	Allan Krumholz – <i>Baltimore</i>	Karen Parko – <i>San Francisco</i>
Sharon Bottomley	Curt LaFrance	Paul Rutecki – <i>Madison</i>
David Chen – <i>Houston</i>	Maria Lopez – <i>Miami</i>	Janet Spencer – <i>Portland</i>
Glenn Graham – <i>VACO</i>	Adriana Ortega	Guiomar Scheid – <i>San Francisco</i>
Ariela Karasov – <i>Madison</i>		

### FY18 ACCOMPLISHMENTS:

- ▶ Established mental health champions at all ECoE sites.
- ▶ Held five mental health journal club discussions.
- ▶ Dr. LaFrance has continued training ECoE members in Cognitive Behavioral Therapy for Psychogenic Non-Epileptic Seizures (CBT for PNES). In the last fiscal year he has completed the training for individuals from two ECOEs and has started training individuals from an additional ECOE and the first consortium site.
- ▶ Dr. Altalib led a nationwide quality improvement initiative to investigate ECoE adherence to American Academy of Neurology epilepsy quality measures.

### FUTURE INITIATIVES:

- ▶ Train at least three additional providers to conduct CBT for PNES and epilepsy in ECoE network in FY18.
- ▶ Implement interventions to improve quality measures identified to have low-adherence.
- ▶ Conduct research project on the utilization of services among Veterans with PNES within the VA system.

## Nursing Workgroup

**Co-Chair: Tracy Broomhead MN RN CNRN SCR N CMSRN**

**Co-Chair: Natalya Kan, RN**

**Administrative Support: Acting Pamela Kelly, DHA, MBA/HCM**

Workgroup Members			
Natacha Jean-Noel – <i>Richmond</i>	Anna M. Shukla – <i>Minneapolis</i>	Robert A. David – <i>Baltimore</i>	Amanda D. Everhart – <i>Durham</i>
Maria Lea Quiane – <i>San Francisco</i>	Tracy A. Broomhead – <i>Seattle</i>	Margaret Young – <i>Durham</i>	Douglas C. South – <i>San Francisco</i>
Brittney M. Betcher – <i>Minneapolis</i>	David M. Schooff – <i>Durham</i>	Ann Carncross – <i>Madison</i>	Jennifer J. Orshak – <i>Madison</i>
Ronda J. Tschumper – <i>Madison</i>	Collette M. Evrard – <i>Portland</i>	Paul A. Rutecki – <i>Madison</i>	Ann M. Konopasek- Morris – <i>KCVA</i>
Adriana C. Valadez – <i>South Texas</i>	Brooke L. Keenan – <i>Madison</i>	Melissa Fadipe – <i>Houston</i>	Kathy L. Browning – <i>Richmond</i>
Janice Broughton – <i>San Francisco</i>	Denise Y. Riley – <i>Gainesville</i>	Sheela Sajan – <i>Durham</i>	Karen Parko – <i>San Francisco</i>
Sharon R. Bottomley	Carol L. Riley – <i>Boston</i>	Carrie Duncan – <i>KCVA</i>	Regina M. McGuire
June V. Hanson	Natalya Kan – <i>WLA</i>	Gregory Head – <i>Boston</i>	Nikki Caraveo – <i>KCVA</i>
Katharine McMillan	Pamela Kelly – <i>SE</i>	Kimberly S. Heckmann	Maria E. Sanchez
Allan Krumholz – <i>Baltimore</i>	Elizabeth Aprile – <i>Charleston</i>		

### FY18 ACCOMPLISHMENTS:

- ▶ Educating EMU and Clinic Nurses: Developed a slide set on psychogenic non-epileptic seizures for Nursing Curriculum for the Epilepsy Monitoring Unit and Outpatient Care. These are available on the ECoE SharePoint.
- ▶ Educating Patients with materials: Developed an AWESOME PNES brochure.
- ▶ Educating Patients with webinars: Workgroup nurses taught 5 of the 12 Thursday Monthly Webinars for the ECoE.
- ▶ Educating Our Workgroup nurses: Several ECoE nurses attended AES meeting in Washington DC in December 2017 and presented at the AANN in San Diego in March 2018.

### FUTURE INITIATIVES:

- ▶ Develop guidelines for establishing *Epilepsy Support Groups* in the ECoEs for Veterans and their caregivers. This will include a flyer to post in clinic to advertise your support group time and place.
- ▶ Continue to develop and then disseminate *Handling Seizures In the Clinic* for the ECoE staff, to increase safety for staff and Veterans.
- ▶ Postictal Agitation - Continue to develop and then disseminate a program for Staff Management of Postictal Agitation in the Epilepsy Monitoring Unit. This program will include a PowerPoint to educate EMU staff.
- ▶ Develop and disseminate an EMU Brochure entitled *What to Expect during your EMU Stay*. This will include pre-visit/visit/discharge education for our seizure patients on the EMU.

## Pharmacy Workgroup

**Chair: Aatif M. Husain, MD and Kathy Tortorice, Pharm D**

**Admin Support: Pamela Kelly, DHA, MBA/HCM and Winona Finley**

Workgroup Members		
Husain, Aatif MD	SE ECoE Director – <i>Co-Chair</i>	(919) 416-5982
Tortorice, Kathy	Clinical Pharmacist – <i>Co-Chair</i>	(708) 786-7873
Boucher, Elise	Research Associate	(210) 617-5300 Ext. 15991
Chiao, Teresa	Pharmacist	(415) 221-4810 Ext. 2927
Clark, Adam	PharmD	(352) 548-6000 Ext. 4425
Dergalust, Sunita	PharmD	(310) 268-3244
Finley, Winona	SE ECoE Administrative Support Assistant	(919) 416-5982
Frontera, Alfred MD	Director, Tampa ECoE	(813) 972-7633
Garga, Nina MD	San Francisco ECoE Director	(415) 221-4810 Ext. 4147
Gidal, Barry	PharmD	(608) 256-1901
Kabir, Arif	Physician	(410) 605-7000 Ext. 6633
Kelly, Pamela	SE ECoE Regional Administrative Director	(919) 416-5982
McMillan, Katharine	Researcher	(210) 617-5300 Ext. 17355
Nguyen, Quynh-Nhu	Pharmacy Resident	(415) 221-4810 Ext. 4375
Parko, Karen, MD	Neurologist	(415) 221-4810 Ext. 4702
Poon, Linda Hue-Ma	Clinical Pharmacist	(415) 221-4810 Ext. 4375
Rehman, Rizwana	SE ECoE Statistician	(919) 286-0411 Ext. 5024
Rutecki, Paul MD	National ECoE Director	(608) 256-1901
Tran, Tung MD	Chief Neurology and ECoE Director – <i>Durham</i>	(919) 286-0411 Ext. 4663

### FY18 ACCOMPLISHMENTS:

- ▶ Provided input and recommendations for national formulary discussions of
- ▶ Development and posting of TMS Course - Antiseizure Medications a Changing Landscape - TMS 35528
- ▶ Collaboration with Women in Epilepsy subgroup on use of oral contraceptives in female epilepsy patients
- ▶ Update of the Antiseizure Drug Selection Table
- ▶ Collaboration with the Women in Epilepsy subgroup on the drug selection table and research initiatives

### FUTURE INITIATIVES:

- ▶ Address issues with access to VANF medications.
- ▶ Potential Research possibilities
  - ▷ Adherence

- ▷ Generic conversions
  - ▷ Adequacy of VANF
  - ▷ Development of a clinical support tool that calculates the probability of side effects with age, type of seizure, and other medication used
- ▶ Improve communication with the field/ECoE sites.

## Women Veterans with Epilepsy (WVE) Workgroup

**Chair: Anne C. Van Cott, MD**

**Admin Support: Pamela Kelly, DHA, MBA/HCM and Winona Finley**

Workgroup Members	
Cusak, Cait ( <i>WH Services</i> )	Karen Parko
Sunitra Dergalust	Mary Jo Pugh
Elizabeth Felton	Jennifer Pritchard
Winona Finley	Rizwana Rehman
Nina Garga	Deanna Rolstead
Barry Gidal	Paul Rutecki
Hamada Hamid	Kathy Tortorice
Pamela Kelly	Anne Van Cott – <i>Chairperson, PA</i>
Maria Lopez	

### FY18 ACCOMPLISHMENTS:

- ▶ Presented WVE QI/QA project results that examined VA Healthcare System fracture risk of veterans treated for new onset epilepsy at national neurology meeting (AAN).
- ▶ Collaborated with VA Women’s Health Program Office to post information on AED Pocket card/Antiepileptic Drug Guidance that address unique concerns associated with the treatment of women diagnosed with epilepsy.
- ▶ Conducted WVE Quality Care Survey of ECoE Sites.
- ▶ Educational programs:
  - “Seizure Medications: consideration in Women” for VA Women’s Health Services (Dr. Nina Garga) followed by Q&A
  - ECoE Webinar 2018 “Managing Epilepsy in women of Childbearing Age” (Dr. Nina Garga)
  - ECoE Webinar 2018 “Bone Health in Patients Treated for Seizures” (Dr. Anne Van Cott)
- ▶ Contributed to project to update and new version of the CPRS teratogenicity counseling template (T drugs Phase 2) for CPRS v31b designed for usage in the diagnosis and treatment of women veteran experiencing.
- ▶ Educational programs for WVE workgroup:
  - Head Injuries During Assaults Against Women: Implications for Recovery from PTSD by Dr. Tara Galovski (Director, Women’s Health Sciences Division National PTSD Center)
  - Catamenial epilepsy - workgroup topic review by Dr. Elizabeth Felton
- ▶ Maintained ECoE WVE Sharepoint Site and expanded WVE library reference on ECoE website.

### FUTURE INITIATIVES:

- ▶ Submit QI/QA project results (fracture risk of veterans treated for new onset epilepsy) for publication to Neurology: Clinical Practice.
- ▶ *Women With Epilepsy (WWE): Beyond Seizure Control Educational Program* at national neurology meeting (AAN) in May 2019.

- ▶ Develop patient/caregiver educational material based on AED Pocket card/Antiepileptic Drug Guidance that address unique concerns associated with the treatment of women diagnosed with epilepsy.
- ▶ Conduct national WVE Quality Care QI/QA project based.
- ▶ Represent WVE workgroup at National VA Women Veterans Health Summit (Boston, September 2018).
- ▶ Update annual review of Anti- Epileptic Drug physician pocket card that highlights concerns specific to the care of women living with epilepsy and continued monitoring of FDA Pregnancy Labeling Changes.
- ▶ Catamenial Epilepsy:
  - Develop specialized diaries/calendars.
  - Develop educational program about catamenial epilepsy to increase VA providers' awareness of issue.
- ▶ Continue to expand workgroup membership in efforts to establish interdisciplinary and geographically diverse membership.
- ▶ Continue to maintain ECoE WVE Sharepoint Site and expand WVE library reference resource on ECoE website.

# Peer Review Committee

The National Advisory Committee is an important part of the ECoE overall team. The National Advisory Committee is responsible for providing guidance and direction to the ECoEs. It will assist in the planning phases of the ECoE to maximize cooperation between the facilities and enhance referral patterns across the VA healthcare system. The National Advisory Committee will also assist in the collaboration between VA sites and affiliate universities. It will establish performance measures with an emphasis on measurable outcomes for the ECoE and will provide oversight of all clinical, educational, and research related activities within the ECoE.\*

## National Advisory Committee Members

**Marc Dichter**, MD, PhD, University of Pennsylvania, ECoE Advisory Committee Chair  
**Michael Amery**, Legislative Counsel, American Academy of Neurology  
**Susan Axelrod**, C.U.R.E.  
**John Booss**, MD, American Academy of Neurology  
**David Cifu**, VA Poly-Trauma Centers Director  
**Tony Coelho**, Epilepsy Foundation  
**Ramon Diaz-Arrastia**, MD, Uniformed Service University  
**Sandy Finucane**, Executive Vice President, Epilepsy Foundation  
**Glenn Graham**, MD, VA Deputy Director of Neurology  
**COL Jamie B Grimes**, MD, MC, USA, Uniformed Service University, Department of Neurology Chair  
**Donald Higgins**, MD, VA National Director of Neurology  
**Patty Horan**, Military Officers Association of America  
**David Labiner**, MD, University of Arizona, National Association of Epilepsy Centers  
**Richard Mattson**, MD, Yale Epilepsy Program  
**Shane McNamee**, MD, VA Poly-Trauma Centers  
**Angela Ostrom**, Chief Operating Officer and Vice President Public Policy, Epilepsy Foundation  
**Jack Pellock**, MD, Virginia Commonwealth University  
**Robert Ruff**, MD, VA Director of Neurology - Retired  
**Brien Smith**, MD, Spectrum Health Medical Group, Michigan State University  
**William Theodore**, MD, Chief of the Clinical Epilepsy Section, NINDS  
**Kathy Tortorice**, Clinical Pharmacist, VA Pharmacy Benefits Management  
**Michael Flowers**, LTCOL, USMC (Retired)  
**Ann Marie Bezuyen**, Director of Special Projects, Anita Kaufmann Foundation  
**Phil Gattone**, CEO, Epilepsy Foundation  
**Jan Buelow**, VP of Programs & Research, Epilepsy Foundation  
**Princess Katana**, Senior Director for Programs, Epilepsy Foundation  
**Rosemarie Kobau**, MPH, MAPP, Centers for Disease Control and Prevention, Epilepsy Division  
**Tim Tilt**, ECoE Veteran Patient  
**Francis White III**, Veteran Patient  
**Ed Perlmutter**, Congressman, Representing 7th District of Colorado  
**Karen Parko**, MD, Former ECoE National Director  
**Ryan Rieger**, MHA, Former ECoE National Administrative Director

*\*Membership listed is current through recent review, updates to be made following first meeting November 30 under new name.*

## Advisory Committee Chair FY2017 Letter to SecVA\*



Marc A. Dichter, MD, PhD  
Professor of Neurology and Pharmacology

January 5, 2018  
Laurence J. Meyer MD PhD  
Chief Consultant of Specialty Care Laurence.Meyer@va.gov

### Re: Annual External Evaluation of the VA Epilepsy Centers of Excellence (ECoEs)

ECoE National Advisory Board Meeting Report - Friday, December 1, 2017

Dear Dr. Meyer,

#### Executive Summary:

As Chairman of the ECoE National Advisory Board, I'm submitting this year's progress report and evaluation of the activities, accomplishments, challenges, and future goals of the VA Epilepsy Centers of Excellence (ECoEs). The Board met at this year's Annual Meeting of the American Epilepsy Society to review each of these issues. As you know, the Board is composed of non-VA personnel – experts in epilepsy and representatives of individuals with epilepsy both in the VA and in civilian life. Currently, 1.3% of all VA patients have a diagnosis of epilepsy and approximately 1% of Veterans returning from OEF/OIF/OND have epilepsy. The latter number is likely to increase over the next few years as active duty personnel with significant traumatic brain injuries are likely still being cared for by the DOD, and, in addition, because, in my personal professional opinion, a significant fraction of Veterans with PTSD after TBI are likely have undiagnosed partial seizures. Of note, the mortality of OEF/OIF/OND veterans with epilepsy is nearly 5 times greater than the mortality of those veterans without epilepsy (MMWR 2016 Nov 11;65(44):1224-1227).

Over the duration of the ECoEs' 8-year existence, the External Advisory Board has been very impressed with the progress made in multiple areas. These specifically include (1) the improvements to access to specialized care for Veterans with epilepsy, especially with regard for the relatively seamless transfer of Veterans from their home facilities to the centralized areas of excellence, (2) the clinical and educational programs developed for Veterans, their families, physicians, and physician extenders, (3) the connection with mental health programs required by these Veterans, and (4) the likely significant cost savings to the VHA by the new centralized facilities. These accomplishments were fostered by a close collaboration among the centers on a national scale, the skills and caring exhibited by all the personnel within the multiple ECoEs, the leadership provided by Dr. Karen Parko and Dr. Paul Rutecki, as well as all of the individual ECoE Directors, and the senior staff with whom our Board has interacted, and who developed and implemented many of the educational and outreach programs established by the ECoEs. Of particular note is that in 2014, at the AES Annual Meeting, Drs. Karen Parko and Robert Ruff were awarded the Epilepsy Service Award by the AES for their leadership in developing this outstanding national program and for overseeing its initial activities. The AES Service Award is the highest award bestowed by our society for service to individuals with epilepsy.

In the sections below, I will briefly outline this year's accomplishments of the ECoEs and their goals for the upcoming year. I will then discuss briefly the **special, and potentially existential, challenges** the ECoEs face going forward because of shifting funding from specialized programs, such as the ECoEs to general purpose funds.

### **Detailed Report:**

The National VHA consortium established by the ECoEs now includes 110 VHA healthcare providers in 78 VA facilities all over the country. The program is divided into four regions, roughly based on geography and number of Veterans served. Each region is considered as a Center and has several sites, at least one of which is at the same location as a polytrauma center. Each of the Centers is staffed by epilepsy specialists and trained staff, and includes inpatient monitoring programs and surgical expertise.

At last two years' annual meetings, discussion highlighted the data on the psychological problems commonly associated with individuals with epilepsy, as well as with traumatic brain injury, and the strong relationship between PTSD, epilepsy, and psychogenic non-epileptic seizures (PNES). This has been an increasingly recognized issue in the civilian population as well as in our Veterans. Research at the Portland VA, one of the ECoE centers, demonstrated that a significant portion of Veterans who had events that were thought to be epileptic seizures and were sent to the epilepsy monitoring unit, were determined to have psychogenic non-epileptic seizures. These can be as disabling as true epileptic seizures and are particularly resistant to pharmacological therapies. In response to this increasingly recognized problem, as well as the issues of the significant frequency and potentially devastating impact of PTSD in the veteran population, several new initiatives were developed to provide enhanced psychological support and a program of cognitive behavioral therapy (CBT) was instituted. CBT is currently recognized as a major therapeutic modality for PNES and epilepsy. Providers using CBT have been trained by Dr. Curt LaFrance (Providence, RI) using ECoE funds. All four regional centers now provide CBT for PNES, an issue that was emphasized during last year's evaluation as a critical addition to the therapeutic armamentarium for Veterans with epilepsy. A white paper that assesses existing mental health epilepsy services and describes existing models of care across ECoE sites was completed and gaps in care were identified and recommendations for a potential health service intervention were made and implemented. Currently, a "mental health" champion has been identified at each ECoE site to help implement this added level of care. In addition, studies were initiated to evaluate interactions of anti-seizure drugs with psychogenic drugs, to minimize potential deleterious interactions. In addition, ECoE members obtained a VA grant to examine the epidemiology of epilepsy and traumatic brain injury in the veteran population.

A second area of continuing growth within the ECoEs relates to providing specialty care to Veterans with epilepsy who are unable to attend clinics either at the ECoEs or even, often, at local VHA facilities. The ECoEs have continued to utilize a variety of telehealth initiatives to serve these Veterans, which is a win-win situation, as the Veterans are able to receive excellent consultative interactions with highly skilled specialists either at participating facilities near where they live, or even, at times, at home. Currently, the ECoEs can perform chart reviews with local physicians, perform remote patient consults, analyze remote EEGs, and have direct patient contacts, all without the Veterans having to travel to a distant site. This is also a potential cost saving measure for the VHA system. This is the kind of system that the "private sector" has been very slow to develop, at least in part because of reimbursement issues for these services. Overall, the VA ECoEs appear to be at the forefront of using telehealth and related technologies for delivering cost efficient and patient satisfying health care to Veterans with epilepsy living significant distances from specialized VA facilities.

Another continuing activity among the ECoEs in optimizing Epilepsy Monitoring Unit (EMU) services and enhancing interactions with the VH health care network is an ongoing process and will be continued this

fiscal year. This component of the program grew rapidly over the first several years and has reached somewhat of a steady state more recently. This is likely due to funding freezes which has limited replacing vital personnel and in some cases equipment, and also a leveling out of the Veterans being referred to the ECoE monitoring centers. Issues included the number of beds and staffing for epilepsy monitoring units. None the less, access improvements continue to be goals to address in the current fiscal year. Of note, many of the inpatient episodes of video-EEG monitoring performed at ECoE sites are being substituted for referrals to outside institutions. In the past, it was estimated that this could translate to a saving of possibly as much as 6 million dollars (or more) which is approximately the size of the total ECoE annual budget.

Physicians within the ECoEs had developed their own patient intake system within the ECoE electronic medical record that will facilitate patient encounters, insure that all relevant data is obtained, even by non-specialists, and also enable the capture of all the data for subsequent clinical research including outcomes research. This was tested in Phase I by the ECoEs, reworked in Phase II and is now awaiting approval for full distribution to the "spokes" in the "hub and spoke" system for widespread use. It is anticipated that this will be distributed throughout all VHA facilities within one or two years. Nothing this comprehensive exists within the civilian epilepsy community.

Research efforts continue to be strong at the ECoE sites, although not directly funded by the ECoE funds. A prospective study is evaluating characteristics of patients with epilepsy and psychogenic non-epileptic seizures (PNES). This research will help our understanding of the relationship of PTSD with epilepsy and PNES. Many prominent epilepsy specialists feel that some of the intermittent behavioral and cognitive symptoms of PTSD, especially PTSD after TBI, could be due to subtle, non-convulsive seizures. If identified, these seizures could be treated and some of the issues related to PTSD could be resolved. Thus, the relationship between post-TBI PTSD could go in two directions: PTSD patients may have non-epileptic events that are mistakenly diagnosed and unnecessarily treated and other PTSD patients may have subtle events that are, in fact, seizures that are not diagnosed or treated. This research by the ECoEs has the promise of dramatically improving the care of Veterans with PTSD and also has consequences for the civilian population as well. This is one of many examples where the VA can be out front in clinical research that has significant impact both within the Veteran population but also for our country as a whole. A letter of intent was submitted for a nationwide ECoE VA Cooperative Study of 'TBI and Psychogenic Seizures: Characterization and Treatment of a model Post-Traumatic Conversion Disorder'.

The San Francisco VA ECoE used an online patient community platform directed to Veterans to show that self-management and self-efficacy improved for those that participated. The Durham VA used the VHA Support Service Center (VSSC) to assay the number of Veterans with epilepsy and co-morbidities and found comorbid TBI and PTSD were 15.8% and 24.1%, respectively. For OIF/OEF/OND Veterans, these percentages increased to 52.6% and 70.4%, respectively. The higher percentage of TBI and PTSD in Veterans of the most recent conflicts could represent patients with PNES carrying the diagnosis of epilepsy. Another grant is funded by the DOD entitled: The Epidemiology of Epilepsy and Traumatic Brain Injury: Severity, Mechanism, and Outcomes. In addition, physicians within the ECoEs received 9 Merit grants, 1 Career Development Award, 7 NIH grants, and 13 other grants in the past year.

The ECoEs have continued their educational activities directed at epilepsy specialists, other physicians, other medical providers, and the Veterans and their families. A "Self-Management in Epilepsy" guide was developed. The production of a series of videos for providers is complete and being reviewed by employee educational services. A series of videos of patients explaining their condition was rolled out and entitled "Epilepsy Basic Training". This series also included videos focusing on Introduction to Epilepsy & Seizures, Seizure First Aid, Traumatic Brain Injury, Medications, Psychosocial Issues, Epilepsy Surgery,

Psychogenic Non-Epileptic Seizures, and Advocacy & Awareness. The Advisory Board was very impressed by these efforts.

CME presentations available through the Employee Educational Services were also targeted to primary care providers (Intro to Epilepsy/TBI, Seizure Identification and Workup, Epilepsy Treatment Basics, Adverse Effects of Epilepsy Medications, and Psychogenic Non-Epilepsy Seizures). For general neurologists, the videos were Epileptogenic Lesions on MRI, Management of Status Epilepticus, Women and Epilepsy, Medically Refractory Epilepsy and Pre-Surgery Evaluations, and Sleep and Epilepsy. For epilepsy specialists, the videos were New Antiepileptic Medications and Mental Health and Epilepsy.

Goals for the fiscal year 2018 were reviewed and included developing improved mechanisms for meeting increasing demands for the ECoE services, increasing utilization of telemedicine, finalizing the EMU safety policy, improving quality of care specifically for female Veterans with epilepsy, pursuing data mining for evaluating the economic impact of the ECoEs on VA health care savings and for outcomes research, developing performance improvement projects for intractable epilepsy and depression associated with epilepsy, implementing a program sponsored by UCB Pharma to establish a peer navigation program, continuing to build and enhance the hub and spoke model of care, and increasing eConsults access. In addition, the ECoEs will work with the National Association of Epilepsy Centers to obtain certification for at least 4 sites. This has been a challenge because NAEC requires a significant fee for certification which the ECoEs currently do not have. The Centers will also continue to foster relationships with primary care providers and identify a mental health champions at each site.

There are also plans to complete the pilot evaluation of seizure medications and psychotropic drug use and possible interactions of enzyme-inducing seizure medications with other drugs. This involves tracking seizure medication use in the VHA with regard to ECoE, consortium, and other sites. They will also increase epilepsy patient enrollment in the 1 million Veterans program and continue with the collaboration with Mary Jo Pugh on the DoD grant: The Epidemiology of Epilepsy and Traumatic Brain Injury: Severity, Mechanism, and Outcomes.

A discussion of challenges for the centers took up a significant part of the meeting. Just before we met, the VAH announced a redirection of funds from supporting specific high priority programs, such as the Congressionally authorized ECoEs, to general purpose funds. Two of the Center Directors have already been approached by their hospital directors to provide plans for major reductions in funding for their epilepsy programs. If this were to occur, in even a few of the ECoEs, the entire program, which in many ways depends on the interactions between the centers, will likely disintegrate. Patients with intractable seizures, or other forms of paroxysmal neurological symptoms will likely not be easily referred to other facilities for appropriate evaluation and treatment. Given that even in the best of hands, between 30-50% of patients with epilepsy whose seizures are not completely controlled, this could have very serious consequences for Veterans with epilepsy. It would also affect the ability of Veterans with epilepsy to obtain appropriate mental health treatment, interfere with the evaluation of Veterans with PTSD who may have undiagnosed epilepsy to receive appropriate diagnosis and treatment. In the worst case, such a collapse of all that has already been created in the ECoE program could result in an increased number of Veterans with epilepsy, TBI, and/or PTSD committing suicide, an issue that the VAH has been exceedingly anxious to prevent. Recent research within the VAH has demonstrated that deaths from all causes is five times higher in Veterans with epilepsy from the Afghanistan and Iraq conflicts compared to those without epilepsy.

Many of the other key concerns were carried over from the prior year. These included the reorganization of VA Central Office. The need to re-evaluate organizational charts to meet program needs was discussed.

There was concern about meeting the budget because of grade and pay increases but no budget increases. Currently, the on-board salaries amount to ~\$5.9M of the total \$6.1M FY allotment. There are currently 11 unfillable FTEs just to recruit replacement personnel, including the National Administrator who was so influential in implementing the coordination of all the ECoEs, the overall administration of the funds, and all of the educational programs. There is no funding available for equipment and supplies in the EMUs as well as the necessary staffing.

Overall the Advisory Board members, who widely represent the neurology and epilepsy professional groups in the United States, were impressed by the continuing progress made by the ECoEs with regard to improving the medical care provided to Veterans with epilepsy.

Specifically, the Board was enthusiastic about the VHA's ability to provide tele-health services, something that is difficult to do in the private sector and the ability to carry out important clinical research in the absence of funding from the ECoE program. Also, the Board commended the ECoEs attention to mental health and treatment for PNES. Finally, the continued efforts to educate Veterans, their families and care providers, and the medical profession were highly praised.

Areas of opportunity for the next year include:

1. Growth of the network of consortium sites and an increase in evaluation of Veterans whose seizures are not controlled.
2. Increase in collaborative research.
3. Demonstration of the cost savings the ECoEs produce.
4. Increasing Veteran use of an on-line patient community for self-management.
5. Consider ECoE administrative reorganization that would compensate for limited funding.
6. Make sure all relevant parties are aware of the significantly increased mortality among individuals (and Veterans, specifically) with epilepsy and the likelihood that this would be decreased by increased specialty care.

Overall the ECoEs are meeting the mission of improving the health and well-being of Veteran patients with epilepsy and other seizure disorders.

I hope this year's annual review is helpful to you. Please do not hesitate to contact me if you have any questions about this program.

It is a continuing honor for me to have served in this capacity and hopefully, helped improve the medical care for our Veterans with this very difficult neurological illness which is often a direct result of the TBI experienced in combat.

Respectively submitted by:



**Marc A. Dichter, MD, PhD**

Chairman, VA Epilepsy Centers of Excellence National Advisory Board  
Professor of Neurology and Pharmacology  
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**Board Members Present:** Marc Dichter MD PhD (Chair), David Labiner MD (National Association of Epilepsy Centers), Donald Higgins MD (VA Neurology Director, VA Central Office), Glenn Graham MD (Deputy Director of Neurology, VA Central Office), Mike Amery Esq (American Academy of Neurology), Karen Parko MD (Previous ECoE National Director), Steve Owens (Epilepsy Foundation), Ryan Rieger (Former National Administrative Officer for VA ECoEs), Tim Tilt (Veteran with epilepsy), Francis H. White III, Esq (MSgt. US Air Force Retired, and council to Epilepsy Advocacy and Employment Group), LCDR Joseph Brown, MD (Walter Reed National Military Medical Center).

**VA Staff Present:** Paul Rutecki MD (Acting National Director), Aatif Hussain MD (SE Director), Tung Tran MD (Durham VA), Pamela Kelly PhD. (SE Administrative Officer), Ann VanCott, MD (ECoE Women Workgroup, Pittsburgh, PA), Allan Krumholz (NE Director), Andrew David (NE Administrative Officer), Rizwana Rehman, PhD (SE ECoE Statistician, Durham), Alan Towne MD (Clinical Research Workgroup, Richmond VA), Claude Wasterlain MD (West LA VA), Marty Salinsky (NW Director).

**Board Members Present:** Marc Dichter MD PhD(Chair), David Labiner MD (National Association of Epilepsy Centers), Donald Higgins MD (VA Neurology Director, VA Central Office), Glenn Graham MD (Deputy Director of Neurology, VA Central Office), Mike Amery Esq (American Academy of Neurology), Karen Parko MD (Previous ECoE National Director), Rosemarie Kobau, PhD (Director, Epilepsy Program, CDC), Steve Owens (Epilepsy Foundation), Ryan Rieger (Former National Administrative Officer for VA ECoEs), Tim Tilt (Veteran with epilepsy), Frances White Francis H. White III, Esq (MSgt. US Air Force Retired, and council to Epilepsy Advocacy and Employment Group).

**VA Staff Present:** Paul Rutecki MD (Acting National Director), Mary Jo Pugh PhD (Health Services Research and Development researcher San Antonio), Aatif Hussain MD (SE Director), Tung Tran MD (Durham VA), Pamela Kelly PhD. (SE Administrative Officer), Ann VanCott, MD (ECoE Women Workgroup, Pittsburgh, PA), Allan Krumholz (NE Director), Andrew David (NE Administrative Officer), Rizwana Rehman, PhD (SE ECoE Statistician, Durham), Alan Towne MD (Clinical Research Workgroup, Richmond VA), Claude Wasterlain MD (West LA VA), Marty Salinsky (NW Director).

*\*Committee name changed to Peer Review in 2018.*

# Public Law S. 2162

One Hundred Tenth Congress of the United States of America

AT THE SECOND SESSION

Begun and held at the City of Washington on Thursday, the third day of January, two thousand and eight

An Act

To improve the treatment and services provided by the Department of Veterans Affairs to Veterans with post-traumatic stress disorder and substance use disorders, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

## TITLE IV—HEALTH CARE MATTERS

Sec. 404. Epilepsy Centers of Excellence.

In General.—Subchapter II of chapter 73 is amended by adding at the end following new section:

§ 7330A. Epilepsy centers of excellence

(a) ESTABLISHMENT OF CENTERS.—

(1) Not later than 120 days after the date of the enactment of the Veterans' Mental Health and Other Care Improvements Act of 2008, the Secretary shall designate at least four but not more than six Department health care facilities as locations for epilepsy centers of excellence for the Department.

(2) Of the facilities designated under paragraph (1), not less than two shall be centers designated under section 7327 of this title.

(3) Of the facilities designated under paragraph (1), not less than two shall be facilities that are not centers designated under section 7327 of this title.

(4) Subject to the availability of appropriations for such purpose, the Secretary shall establish and operate an epilepsy center of excellence at each location designated under paragraph (1).

DESIGNATION OF FACILITIES.—

(1) In designating locations for epilepsy centers of excellence under subsection (a), the Secretary shall solicit proposals from Department health care facilities seeking designation as a location for an epilepsy center of excellence.

(2) The Secretary may not designate a facility as a location for an epilepsy center of excellence under subsection (a) unless the peer review panel established under subsection (c) has determined under that

subsection that the proposal submitted by such facility seeking designation as a location for an epilepsy center of excellence is among those proposals that meet the highest competitive standards of scientific and clinical merit.

(3) In choosing from among the facilities meeting the requirements of paragraph (2), the Secretary shall also consider appropriate geographic distribution when designating the epilepsy centers of excellence under subsection (a).

#### PEER REVIEW PANEL.—

(1) The Under Secretary for Health shall establish a peer review panel to assess the scientific and clinical merit of proposals that are submitted to the Secretary S. 2162—18 for the designation of epilepsy centers of excellence under this section.

(A) The membership of the peer review panel shall consist of experts on epilepsy, including post-traumatic epilepsy.

(B) Members of the peer review panel shall serve for a period of no longer than two years, except as specified in subparagraph(C).

(C) Of the members first appointed to the panel, one half shall be appointed for a period of three years and one half shall be appointed for a period of two years, as designated by the Under Secretary at the time of appointment.

(3) The peer review panel shall review each proposal submitted to the panel by the Under Secretary for Health and shall submit its views on the relative scientific and clinical merit of each such proposal to the Under Secretary.

(4) The peer review panel shall, in conjunction with the national coordinator designated under subsection (e), conduct regular evaluations of each epilepsy center of excellence established and operated under subsection (a) to ensure compliance with the requirements of this section.

(5) The peer review panel shall not be subject to the Federal Advisory Committee Act.

#### (d) EPILEPSY CENTER OF EXCELLENCE DEFINED.—

In this section, the term ‘epilepsy center of excellence’ means a health care facility that has (or in the foreseeable future can develop) the necessary capacity to function as a center of excellence in research, education, and clinical care activities in the diagnosis and treatment of epilepsy and has (or may reasonably be anticipated to develop) each of the following:

(1) An affiliation with an accredited medical school that provides education and training in neurology, including an arrangement with such school under which medical residents receive education and training in the diagnosis and treatment of epilepsy (including neurosurgery).

(2) The ability to attract the participation of scientists who are capable of ingenuity and creativity in health care research efforts.

(3) An advisory committee composed of Veterans an appropriate health care and research representatives of the facility and of the affiliated school or schools to advise the directors of such facility and such center on policy matters pertaining to the activities of the center during the period of the operation of such center.

(4) The capability to conduct effectively evaluations of the activities of such center.

(5) The capability to assist in the expansion of the Department’s use of information systems and databases to improve the quality and delivery of care for Veterans enrolled within the Department’s health care system.

(6) The capability to assist in the expansion of the Department telehealth program to develop, transmit, monitor, and review neurological diagnostic tests.

(7) The ability to perform epilepsy research, education, and clinical care activities in collaboration with Department medical facilities that have centers for research, education, and clinical care activities on complex multi-trauma associated

S. 2162—19 with combat injuries established under section 7327 of this title.

(e) NATIONAL COORDINATOR FOR EPILEPSY PROGRAMS.—

(1) To assist the Secretary and the Under Secretary for Health in carrying out this section, the Secretary shall designate an individual in the Veterans Health Administration to act as a national coordinator for epilepsy programs of the Veterans Health Administration.

(2) The duties of the national coordinator for epilepsy programs shall include the following:

(A) To supervise the operation of the centers established pursuant to this section.

(B) To coordinate and support the national consortium of providers with interest in treating epilepsy at Department health care facilities lacking such centers in order to ensure better access to state-of-the-art diagnosis, research, clinical care, and education for traumatic brain injury and epilepsy throughout the health care system of the Department.

(C) To conduct, in conjunction with the peer review panel established under subsection (c), regular evaluations of the epilepsy centers of excellence to ensure compliance with the requirements of this section.

(D) To coordinate (as part of an integrated national system) education, clinical care, and research activities within all facilities with an epilepsy center of excellence.

(E) To develop jointly a national consortium of providers with interest in treating epilepsy at Department health care facilities lacking an epilepsy center of excellence in order to ensure better access to state-of-the-art diagnosis, research, clinical care, and education for traumatic brain injury and epilepsy throughout the health care system of the Department. Such consortium should include a designated epilepsy referral clinic in each Veterans Integrated Service Network.

(3) In carrying out duties under this subsection, the national coordinator for epilepsy programs shall report to the official of the Veterans Health Administration responsible for neurology.

(f) AUTHORIZATION OF APPROPRIATIONS.—

(1) There are authorized to be appropriated \$6,000,000 for each of fiscal years 2009 through 2013 for the support of the clinical care, research, and education activities of the epilepsy centers of excellence established and operated pursuant to subsection (a) (2).

(2) There are authorized to be appropriated for each fiscal year after fiscal year 2013 such sums as may be necessary for the support of the clinical care, research, and education activities of the epilepsy centers of excellence established and operated pursuant to subsection (a) (2).

(3) The Secretary shall ensure that funds for such centers are designated for the first three years of operation as a special purpose program for which funds are not allocated through the Veterans Equitable Resource Allocation system.

(4) In addition to amounts authorized to be appropriated under paragraphs (1) and (2) for a fiscal year, the Under Secretary for Health shall allocate to such centers from other funds appropriated generally for the Department medical services account and medical and prosthetics research account, as appropriate, such amounts as the Under Secretary for Health determines appropriate.

(5) In addition to amounts authorized to be appropriated under paragraphs (1) and (2) for a fiscal year, there are authorized to S. 2162—20 be appropriated such sums as may be necessary to fund the national coordinator established by subsection (e)."

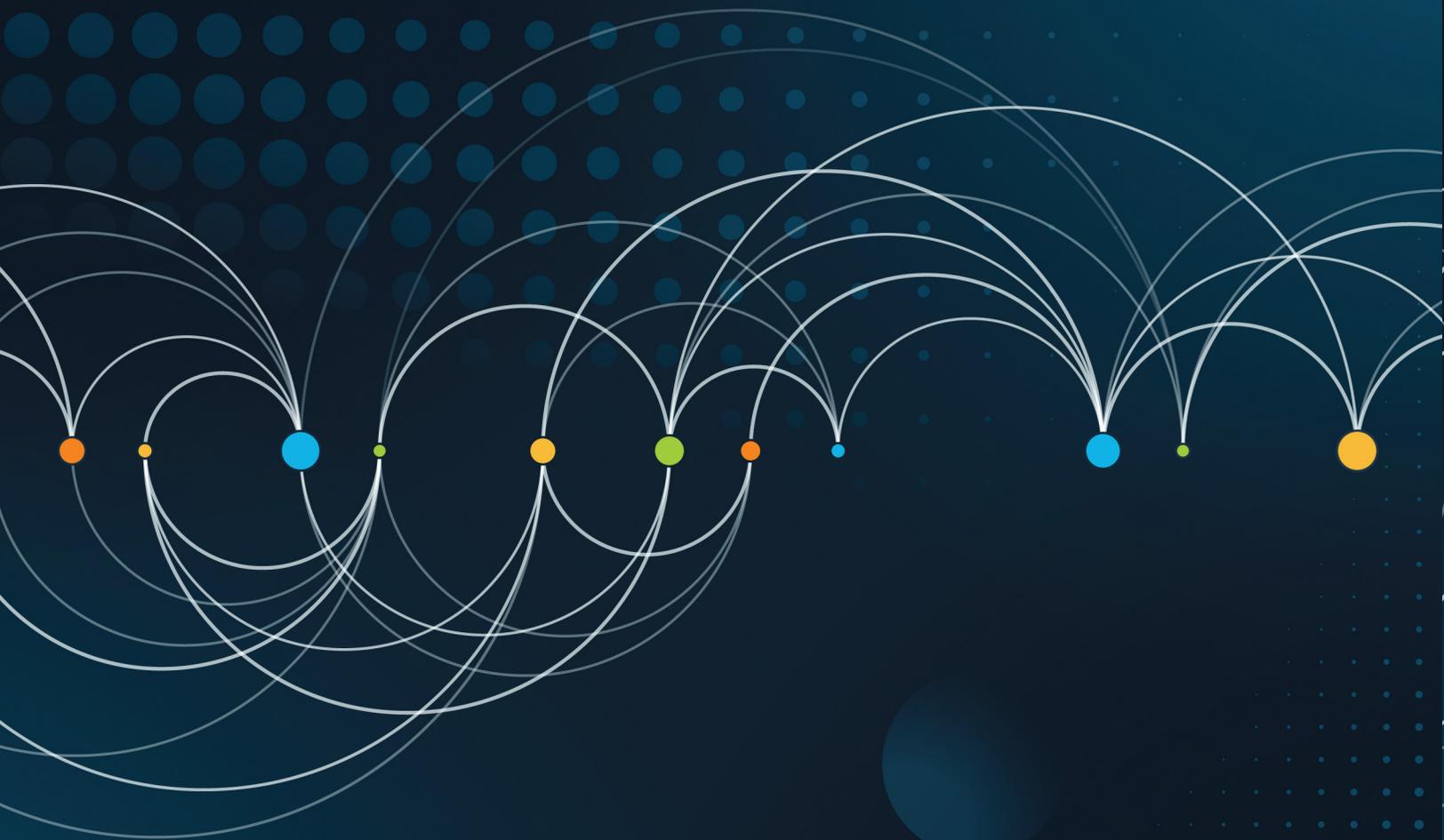
(b) CLERICAL AMENDMENT.—The table of sections at the beginning of chapter 73 is amended by inserting after the item relating to section 7330 the following new item: "7330A. Epilepsy centers of excellence."

# Abbreviations and Acronyms

<b>AAN</b>	American Academy of Neurology	<b>GLA</b>	Greater Los Angeles
<b>ACGME</b>	Accreditation Council for Graduate Medical Education	<b>GRECC</b>	Geriatric Research, Education and Clinical Center
<b>AED</b>	Antiepileptic drugs	<b>HCS</b>	Health Care System
<b>AES</b>	American Epilepsy Society	<b>HIMS</b>	Health Information Management System
<b>CAC</b>	Clinical Application Coordinator	<b>HSR&amp;D</b>	Health Services Research and Development
<b>CBOC</b>	Community Based Outpatient Clinic	<b>IC</b>	Informatics Council
<b>CDC</b>	Centers for Disease Control and Prevention	<b>ICD</b>	International Classification of Diseases
<b>CICU</b>	Coronary Intensive Care Unit	<b>ICU</b>	Intensive Care Unit
<b>CoE</b>	Center of Excellence	<b>IFC</b>	Inter-Facility Consult
<b>CPRS</b>	Computerized Patient Record System	<b>IOM</b>	Integrated Operating Model
<b>CPT</b>	Current Procedural Terminology	<b>IRM</b>	Information Resources Management
<b>CVT</b>	Clinical Video Telehealth	<b>IT</b>	Information Technology
<b>DOD</b>	Department of Defense	<b>LTM</b>	Long Term Monitoring
<b>DSS</b>	Decision Support System	<b>MIT</b>	Means Indicator Test
<b>DVBIC</b>	Defense and Veterans Brain Injury Center	<b>MRI</b>	magnetic resonance imaging
<b>ECMS</b>	Executive Committee, Medical Staff	<b>MSECoE</b>	Multiple Sclerosis Center of Excellence
<b>ECoE</b>	Epilepsy Center of Excellence	<b>NIH</b>	National Institutes of Health
<b>EEG</b>	Electroencephalography	<b>NTRT</b>	New Term Rapid Turnaround
<b>EES</b>	Employee Education System	<b>OAA</b>	Office of Academic Affiliation
<b>EF</b>	Epilepsy Foundation	<b>OEF</b>	Operation Enduring Freedom
<b>EFGLA</b>	Epilepsy Foundation of Greater Los Angeles	<b>OIF</b>	Operation Iraqi Freedom
<b>EMG</b>	Electromyography	<b>OND</b>	Operation New dawn
<b>EMU</b>	Epilepsy Monitoring Unit	<b>PADRECC</b>	Parkinson's Disease Research, Education and Clinical Center
<b>FDA</b>	Food and drug Administration	<b>PET</b>	Positron emission tomography
<b>FTE</b>	Full-time Equivalent	<b>PGY</b>	Post Graduate Year
<b>FTEE</b>	Full-time Employee Equivalent	<b>P.L.</b>	Public Law
<b>FY</b>	Fiscal Year		
<b>GABA</b>	Gamma-Aminobutyric Acid		

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of Excellence